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AMSTRAD PCW

8000 PLUS

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ISSUE 17 • FEBRUARY 1988 • £1.50

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Stop Press

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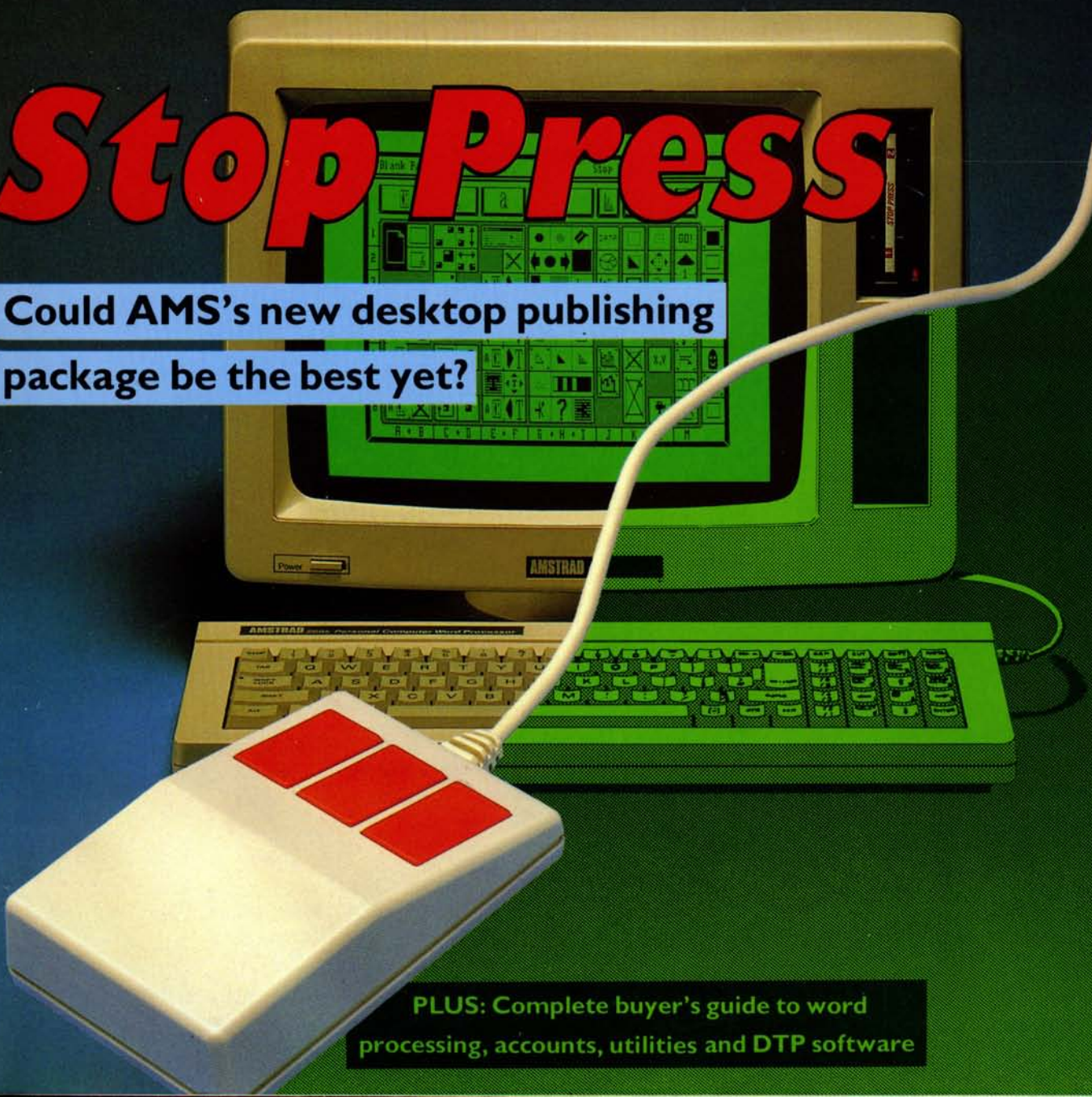

PLUS: Complete buyer's guide to word processing, accounts, utilities and DTP software

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MASTERFILE 8000, the subject of so many enquiries, is now available.

MASTERFILE 8000 is a totally new database product. While drawing on the best features of the CPC versions, it has been designed specifically for the PCW range. The resulting combination of control and power is a delight to use.

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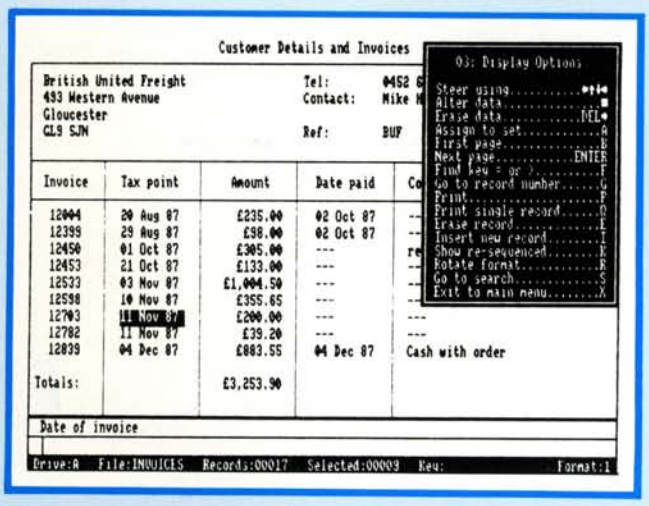

Keyed files are maintained automatically in key sequence, with never any need to sort. You can have unkeyed files too, where records can be inserted at any point in the file.

Any file can make RELATIONAL references to up to EIGHT read-only keyed files, the linkage being effected purely by the use of matching file and data names.

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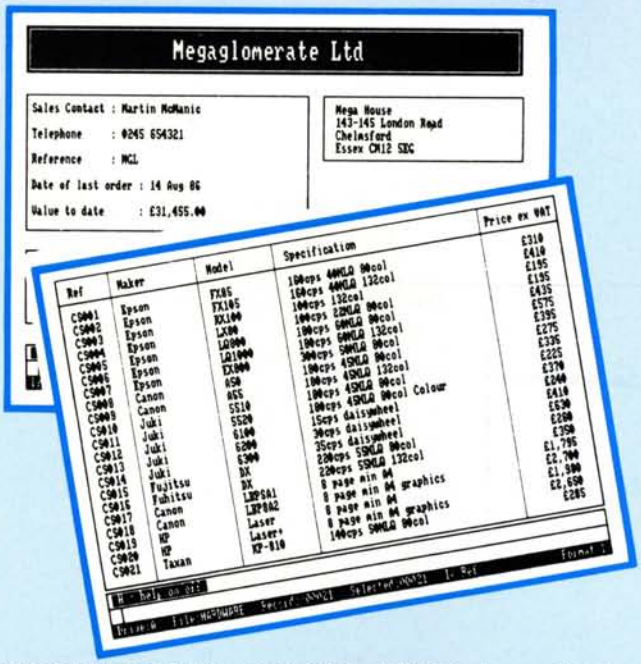
File searches combine flexibility with speed. (**MASTERFILE 8000** usually waits for you, not the other way around.) You can even assign subsets of a file into one or more of seven pigeon-holes for subsequent reference or further manipulation.



FIELD-TO-FIELD CALCULATION is available, using any mixture of terms and arithmetic operators + — * / ( ).

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ABC Jan - June 1987
23,180

OPENING MENU

OPENING MENU

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We needed even more space to show you all that's new in the Amstrad marketplace -so we've moved to ...

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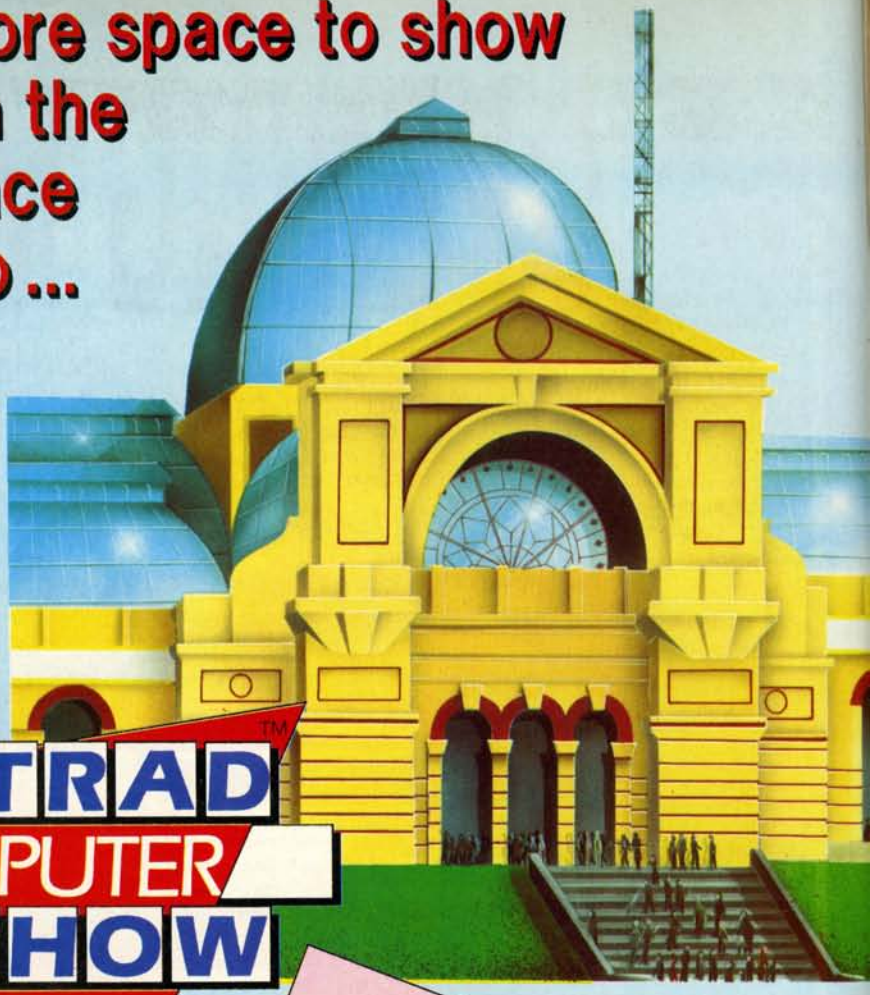
Wood Green, London



AMSTRAD™ COMPUTER SHOW

Note new dates

10am – 6pm Thursday, February 4
10am – 6pm Friday, February 5
10am – 5pm Saturday, February 6

Note new dates

It's here!

This is YOUR chance to try out for yourself the new Amstrad portable – the machine the press is raving about!

FREE presentations in the Amstrad Theatre

You can sit back in style and learn all about the latest releases for the Amstrad computers – and get expert advice from some of the best brains in the industry. What's more, there's lots more seats than ever to meet the high demand for this very popular attraction.

This is YOUR chance to meet top people in the world of Amstrad. Among them will be experts from:

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Bring this coupon to the Show to get 50p per person off the normal admission price of £3 (adults), £2 (children).

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AMSTRAD™ COMPUTER SHOW

Thursday, February 4, 10am-6pm
Friday, February 5, 10am-6pm
Saturday, February 6, 10am-5pm

Alexandra Palace, London N22

How to get there: By British Rail to Alexandra Palace station (9 mins. from King's Cross), then FREE shuttle bus to the show. By road from junction 25 on the M25 (15 mins). Free parking.

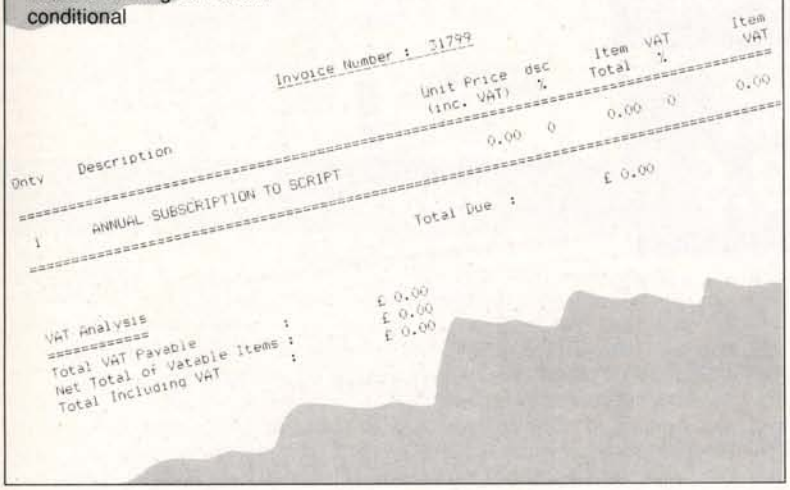
A266

People in glass houses

The old jokes are always the best – ever since computer invoicing began there have been stories in the papers about people receiving uncompromising demands for nought pounds nought pee *or else*.

Locomotive Software have just very kindly sent us a complimentary subscription to their LocoScript newsletter, *Script*, and their automatic system followed up with the invoice shown. For sheer number of zeroes, it must win an award. Haven't the makers of LocoMail ever heard of testing for zero in conditional printing commands?

Just so they don't strike us off their lists in a fit of pique, we ought to say that *Script* is undoubtedly a valuable source of help for LocoScript 2 users on 8000s and 9512 alike. It gives details of all new LocoScript improvements, together with general articles explaining headers and footers etc, all for £9.95 a year from Locomotive Systems, Allen Court, Dorking, Surrey RH4 1YL.



Invoice Number : 31799

Qnty	Description	Unit Price (inc. VAT)	dsc %	Item Total	VAT %	Item VAT
1	ANNUAL SUBSCRIPTION TO SCRIPT	0.00	0	0.00	0	0.00

Total Due : £ 0.00

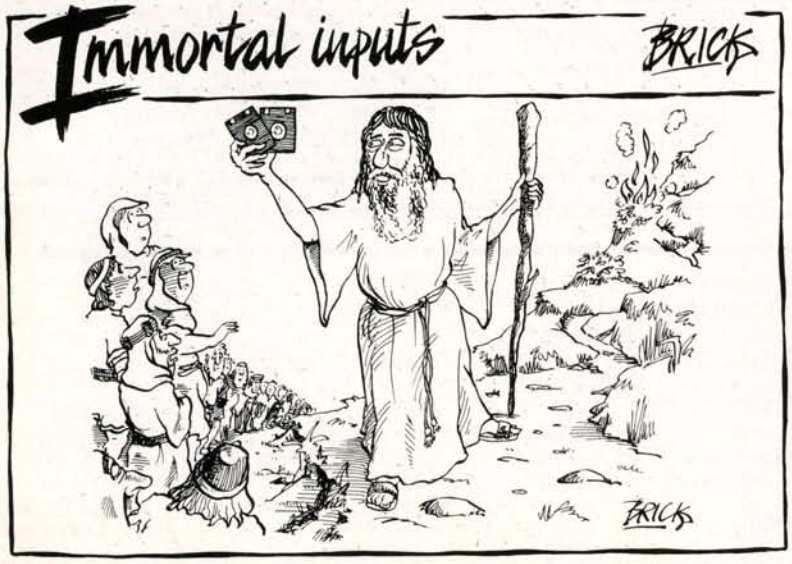
VAT Analysis

Total VAT Payable :	£ 0.00
Net Total of Vatable Items :	£ 0.00
Total Including VAT :	£ 0.00

Double size discs?

The Amstrad User Club circulates a newsletter to all its members with details of new products on its catalogues. Among the recent additions is SBS's 'Clearhead' disc drive cleaning kit. The advert reads, "If you've ever experienced prompts such as 'BAD SECTOR: TRACK 5 SECTOR 21' then you need worry no longer...".

If you do ever get this message, start worrying. Computer boffins out there will know that PCW discs only have 9 sectors per track, so if your disc drive gets to sector 21 you've got more than just dirty heads!



CRYSTAL BALLS

Even though this is the February edition of 8000 Plus, the vagaries of the magazine trade mean that it is our first issue of 1988, on sale in January. Traditionally at this time the papers are full of the usual predictions for the forthcoming twelve months – Charles and Di to get divorced, and other old chestnuts. What better time then to indulge in a little gazing into the crystal ball of the Amstrad world?

Amstrad of course have many more products than the PCW. However, their recent fortunes have increasingly been due to sales in the small business sector, and Alan Sugar is sure to see this continuing as a good market place. A product that has been rumoured for some time now by the professional Amstrad-watchers is a portable Fax machine ("acsimile transmission' to the uninitiated). Current Fax machines cost several thousand pounds and are pretty bulky. If salesmen could take a Fax machine with them, plug it into any BT phone socket and send orders or requests back to base it could revolutionise business. With a modem and portable computer you can send messages via electronic mail even now, but to be honest most businessmen don't like the computer jargon electronic mail depends on, and anyway feel happier with a paper copy at the receiving end rather than a disc file. Who knows, a portable Fax could replace the car-phone as the executive toy of the year.

Another front that can't have failed to catch Alan Sugar's eye is desktop publishing. The Apple Macintosh has until now been the DTP market leader in serious business, and the strength of the market is illustrated by the fact that Apple DTP systems cost around £5,000 but still sell in droves. If Amstrad could produce a cheap but high quality DTP system, they would make a fortune (well, a bigger fortune). There are two options here. First, they could produce a straight Macintosh clone, which could take advantage of all the existing software much as the Amstrad PC1512 succeeded by undercutting the IBM-PC market. However, this may not prove feasible, so the alternative is to produce a dedicated desktop publishing machine, complete with page makeup software and a built-in laser printer. In effect, this would do for the world of DTP what the PCW did for the world of word processing – provide a system so simple, cheap and effective that it becomes the new standard.

An Amstrad DTP machine would be a worthy successor to the PCW, but it is probably safe to say that such a machine must be a year or two away still. And the price? Well, it would have to be in four figures, so it isn't going to knock the faithful PCW over just yet.

B. Taylor

Missing persons

Help! We've lost contact with C.P. Edwards from Colerne, Wilts, to whom we owe some money for a recent TipOff. If you'd like to get in touch, the cheque's in the post...

8000 PLUS

The March issue of 8000 Plus is on sale on Thursday February 18th. Just right for a late Valentine present!

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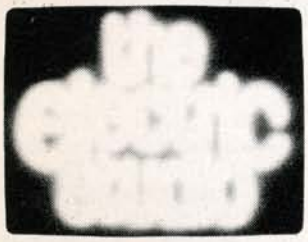

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Address .....

.....

..... Post Code .....

Tel. No. .....

Please debit my Access/Visa Card No:

.....

Expiry Date .....

Signature .....

Point of Sales trials

Avon Business Computers have launched a new evaluation scheme for their PCW Point of Sales package. The POS system is basically a well thought out idea to use a PCW to print receipts and keep track of cash in a shop. The main problem is that at £194.35 many shopkeepers might be reluctant to take a chance on it.

Now for £10 plus VAT prospective buyers can get a disc, a manual and some receipts so they can try it out for themselves. If they then decide to buy, the £10 is knocked off the final price of the product. For details phone 0761 70543.

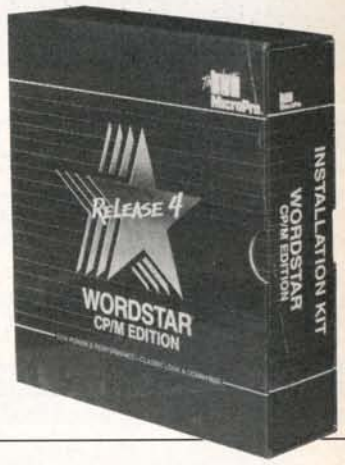
WordStar Professional

In the old days, WordStar was the king of word processors, calling itself the 'industry standard' with some justification. On the PCW, LocoScript, NewWord and then Protext seemed to overtake it, but now MicroPro International – WordStar's makers – are hitting back.

With three million sales of previous versions on all computers, MicroPro have announced WordStar Professional Release 4 for the PCW, aimed principally at office 9512 users. It claims 120 improvements – but price isn't one of them. WordStar 4 costs £194.35, and existing owners of WordStar can upgrade to the new version for a mere £102.35 including VAT. How this pricing policy dents sales of LocoScript 2 (£19.95) and Protext (£59.95) remains to be seen.

The new model boasts among other things a word counter, a built-in four function calculator, and 'undo' command (which LocoScript users will envy). There's also two-printer access, hanging tabs and proportional spacing (LocoScript users can feel smug as they already have these), though MicroPro note enigmatically that this last feature may require a 'British dictionary'.

Further information from MicroPro on 01-879 1122.



Horse sense

Have you ever looked at a racecard and wondered how to make sense of all the information – form, runners, riders, prize money and so on? Perhaps you want to go on something more scientific than hunches all the time. DGA's *Pro-Punter*, now available on the PCW, is a program which claims to interpret racing form for you and can advise you where to place your bets. According to DGA, trials in both National Hunt and Flat seasons saw a return of 80% profit on stake investments when the Pro-Punter top rated horse was backed.

You key in information about trainers, horses, jockeys, courses and so on and gradually build up a 'knowledge base' on disc. On race day you enter the details from the racecard and then ask the program to advise you on which horse or horses, if any, your money should go. If none of the odds offered on any horse look promising it'll advise you not to bet. Of course DGA can't guarantee you'll win. Pro-Punter costs £57.50 and DGA's address is PO Box 36, Ashton-under-Lyne, OL7 9AJ.

Green piece

Have you ever thought as you vegetate in front of your PCW how nice it would be to have some company? HeptaCon, the company responsible for the decision maker *Second Opinion*, have brought out *The Houseplant Disc* to help you choose which plants would thrive best in the conditions of your house.

"NOT ONLY DOES IT CHOOSE IT— IT TALKS TO IT AFTER AS WELL"

It's essentially a 'decision database' which holds detailed data on over two hundred different types of plant – the position they prefer, size, their preferred temperature and so on. You run the program when you are deciding which plants would most suit your lifestyle and the environment you live in. The program asks you to give a rating out of 10 to each of several factors such as how important it is that the plants do well in a cold room, how much you want a trailing plant and so on (but nothing about whether you want to talk to them or not). The Houseplant Disc then scans its information base and gives you the top 20 most suitable plants on the basis of your preferences.

Plant fanciers can also use the program as a conventional database and access details for each plant individually, by the everyday or Latin names. The Houseplant Disc costs £19.90 inclusive of VAT and p&p; details from HeptaCon on 0279 33071.

Holy accounts packages, Vatman

Following our review of accounts programs last month, Digita have made some improvements to their *Business Controller* program. Until now the entry of VAT has been rather cumbersome, making the package unsuitable for VAT-registered small businesses.

On the new version, the [+] and [-] keys will add or subtract the tax amount automatically to or from the figure displayed on the screen. VAT amounts are stored in the memory and can be accumulated or recalled at any time. Details from Digita on 0395 45059.

There's news too for users of Cornix Software's popular *Simple Accounts* package. A new version gives the option of accounting for VAT at either the traditional tax point or, for users adopting the new VAT Cash Accounting Scheme introduced in October, at the cash point.

As well as a free upgrade for existing users, there's a free utility which adapts records to deal with the new system. Further info from Cornix on 0462 682989.

Bottom line databases

Everybody needs a database to organise themselves, and there are two new low-cost PCW databases out this month. *Keybase* is a general purpose database with the usual facilities of sorting on any field, calculations, searches, reports etc, and costs £19.95 from Unicorn Software, 45 West Terrace, Hucknall, Nottinghamshire NG15 7GD.

Another package, this time specifically designed for cataloguing your record collection and all those back issues of magazines is the pair *LPs* and *Magindex*. These two, written in BASIC for the PCW, sell for £15 from KOS, 99 Orchard Road, Kingswood, Bristol BS15 2TZ.

Public Domain split

There's a reorganisation going on in the world of Public Domain software suppliers. 'Public domain' is a scheme whereby authors declare their software may be given free to anybody who asks for it. Several clubs exist to distribute this PD software for all computer types, although the clubs usually charge a fee to cover their costs. 8000 Plus reviews one PD program a month.

PD SIG, the Public Domain Special Interest Group, is in the process of building its own library of software from scratch after breaking links with the Public Domain Software Library. The PD SIG say that the split has come about because the PDSL was becoming cluttered with old software for defunct machines, although the PDSL have a different version of events. The PD SIG are working on their own catalogue which they claim will be better organised and more relevant to PCW owners.

At present they have been concentrating on IBM PC-related products (they already have 300 such discs) but they expect that by the time this magazine reaches the shops they will have got things organised on their list of PCW programs.

There's a new cataloguing system which categorises PD discs. This follows disputes between the UK public domain suppliers and an American PD outfit 'PC SIG' who claimed that the British libraries were using their copyright cataloguing scheme.

If you want to know more about PD software or the PD SIG itself, phone 0895 51978 (club membership and donating PD programs) or 01 864 2611 (program enquiries).

In response, the Public Domain Software Library point out that they are still operating their list of PCW software normally. As an incentive, they are offering free membership until October 1988 to PD SIG members who wish to carry on taking advantage of the existing public domain library. Send a large SAE for a catalogue to Winscombe House, Beacon Road, Crowborough, East Sussex TN6 1UL for details, or phone 08926 63298.

Cleaner discs and printers

Following on from their recent PCW disc drive cleaning kit, *Clearhead*, SBS Computer Supplies have introduced *Cleanprint*, a cleaning kit for your PCW printer.

Unlike the conventional printer cleaning kits Cleanprint comes in the form of a cassette which fits into your printer like a printer ribbon. You then just 'print' 60 lines of text to clean the printer head. A canister of compressed gas is also included in the £16.95 package which can be used to blow away any small particles from the print head and it even contains cleaning sachets for your hands. It allows you to clean the printer up to eight times.

This is a natural progression following the SBS launch of *Clearhead*. For months the pages of 8000 Plus have been filled with urgent pleas from PCW users looking for a method of cleaning their disc drives. SBS's Steve Wadman said, "You have no idea how frustrating it is when you know there is a demand for something and you can't get anyone interested in producing it."

Eventually they took matters into their own hands and produced their own cleaning kit. For £9.50 the package contains a standard 3" disc case containing a proprietary cleaning cloth disc and a special cleansing fluid. Every so often, or whenever errors occur, you soak the disc in the fluid, load it for 30 seconds and the makers claim all traces of dust, smoke and oxide particles will be removed. You get enough fluid for 15 cleans. In theory, this process should reduce the number of disc errors you get in both LocoScript and CP/M, protecting data on your discs.

Cleaners are available for most makes of computers but until now there was nothing for the PCW. As the machines begin to age PCW users are increasingly bothered by 'Read fail' or 'Bad sector' error messages, often a symptom of a dirty disc head.

As proof of the demand SBS claim impressive sales figures. Since the launch in mid-November the company say they have had orders for 15,000 units and they have appointed dealers in America. They are now actively looking for outlets in the lucrative markets French, German and Spanish markets. SBS are on 0273 726331.

From Russia with love

Mirrorsoft (01-377 4837) are releasing *Tetris*, apparently a Russian game, for the PCW. This isn't just another adventure or shoot-'em-up – it involves quite a bit of thinking. You have to fit together shapes which appear on the screen in a line at the bottom, using the keyboard or a joystick, and Mirrorsoft say it's dangerously addictive. There's even a 1988 Championship being organised for those who send in the highest scores with the first prize being a trip for two to Russia (and hopefully back).

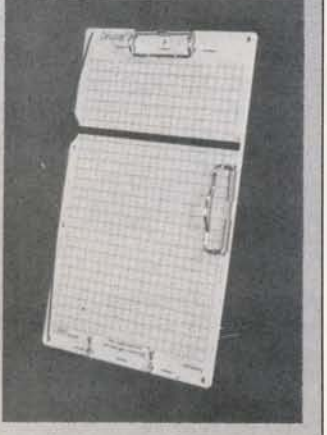
Moving story

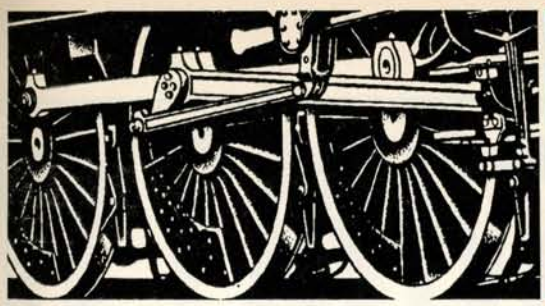
PCW show has been moved from its old haunts of Olympia to the more spacious main hall of Earls Court. (PCW is nothing to do with the PCW, of course, but stands for Personal Computer World). This year there will be separate Business, General Computing and Leisure areas, and the show will run from 14th-18th September. Info on ticket sales and so on will be advertised nearer the time.

Hold the middle page

Kador have brought out another in their line of hardware add-ons for your PCW desk. The *Dexette* is a free standing clip board device which can be used to hold documents upright next to your PCW for you to copy-type from, or just to prop up your copy of 8000 Plus open at the Tip Offs page. You can use it in portrait (tall and thin) or landscape (short and fat) positions. It has adjustable clips, wires and pieces of elastic which transform it into a bookrest, a clipboard, or a graphic underlay board complete with line grids and a cursor arm for horizontal lining up.

You can also use it as a write/wipe board using a water based ink, and can even adjust it to be right-handed or left-handed and use both sides simultaneously if you wish. Now how's that for versatility. Dexette costs £6.00 in A4 size, £7.50 in the smaller A5 size, and is available from Kador on 0784 252662.

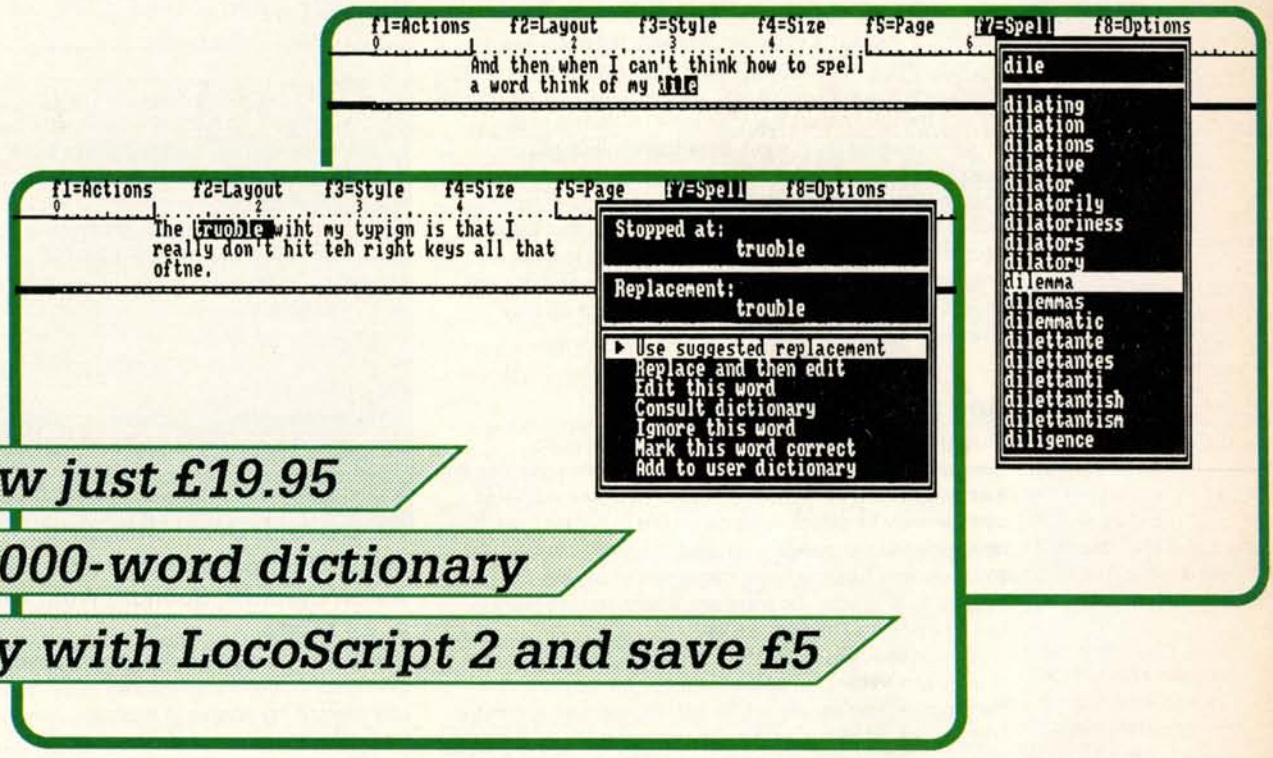




LocoSpell

from Locomotive Software

The Spelling Corrector and Proof Reader for LocoScript 2 on your PCW8512 or 8256



- *Now just £19.95*
- *78,000-word dictionary*
- *Buy with LocoScript 2 and save £5*

LocoSpell checks your typing against Longman's 78,000 word dictionary. When LocoSpell spots a mistake, you can accept its suggested correction, correct the word yourself, or add it to your own private dictionary.

LocoSpell will run on a PCW8256 or PCW8512 with LocoScript 2 version 2.03 or later. On a PCW with 512K memory the 78,000-word dictionary can be read into memory when LocoScript is loaded, and is then always available until it is deleted or LocoScript is re-started. With 256K memory, the 78,000-word dictionary can only be used from disc, though a 17,500-word dictionary can be used from memory. Locomotive Software recommends the upgrading of PCW8256s to 512K memory for the best operation of LocoSpell. The Locomotive Memory Upgrade Kit is available for this purpose.

To: Ruth Ibbert, Locomotive Systems,
Allen Court, Dorking, Surrey, RH4 1YL
Phone (0306) 887902

Name _____

Address _____

_____

_____

Postcode _____

Please send me the following products

☐	LocoSpell for LocoScript 2 requires LocoScript 2.03 or later.	£19.95
☐	LocoScript 2	£19.95
☐	LocoScript 2 with LocoSpell	£34.90
☐	Memory Upgrade Kit	£24.95
	Total	_____

☐ I enclose a cheque payable to Locomotive Systems Limited

☐ Charge to my Access Card

WHAT'S

Tinker, tailor, soldier or VAT collector... there's a good chance someone has written a program just for your business

One of the most exciting things about the PCW range of computers is that they have become the standard workhorse computer for small businesses. Throughout the country people who always said, "We can't afford a computer" are realising that for little more than the cost of a filing cabinet they can buy a word processor too.

But the PCW is more than a wordprocessor. as Amstrad's adverts always said. Once they've realised that the PCW is a computer as well as a typewriter, most businesses invest in a cashbook or accounts program, and maybe – with tender dreams of a paperless office – a database program.

The trouble is that if you're running an organic farming project you probably don't want half of the features in typical business software, such as fixing your shareholders dividends for the year. Similarly, most doctors would be bemused by the question, "What was the capital cost of your tractor?" If you buy a database program, inevitably you've got to spend a week setting it up so that you have got all the categories you want. What you need is something pre-set to take all the information that your line of business uses.

Of course the thing about computers is that you can program them to do whatever you want. In theory. The only snag is that you have to have a certain amount of technical skill to do that, and a lot of spare time which most business people don't have. But it ought to be possible to have a program which does *exactly* what you want – no more and no less – and can be adapted to fit your needs as they change.

And now the good news

Throughout the country there are people in specific businesses who have taken the trouble to write programs for themselves, and often these programs are then marketed commercially for others in the same line to benefit from. This highly specialised software is called 'Vertical Software'. If your business has any trade magazines or papers, the best thing to do is to scan the small ads where you are likely to find a helpful soul offering advice.

Buying specialist software is not like buying a database or word processor. The person selling it will be the author of the program, and usually will be only too pleased to receive suggestions on how to improve the program. If you ring up Amstrad to suggest how LocoScript could be improved you will get pretty short shrift, but if you ring up a typical vertical software producer they may well be able to modify the program to suit in a few days and send you a new version.

Prices range from the very cheap to the very expensive. As with everything in life, yer gets what yer pays for. At £10, don't expect too much in the way of after-sales support, but some of the programs aimed at the more affluent professions cost over £100 and for that you can expect to get regular upgrades of the program if your business changes (maybe due to a change in the law) and to be able to ring up for personal advice if things go wrong. After all, we're talking about computerising your livelihood here, not just playing a game.

All prices quoted in the following reviews *exclude* VAT, since most businesses claim it back anyway.

REQUISITION – Catering

£65 ● Cantlow Software (Pear Tree Cottage, Aston Cantlow, Solihull, West Mids B95 6HZ)

● All PCWs

Requisition is a program designed to help catering managers or ambitious housewives gauge the correct quantities of ingredients to order and how much to charge for a given menu.

It is essentially a database specifically for recipes and foodstuffs. You have to make two sets of data for the program to draw on. First you set up a cost list of ingredients which is along the lines of "Onions – 24p per pound, Eggs – 105p per dozen" and so on. You can express the cost as being for a pound, a kilo, a pint, a litre, a dozen, or 'each'. If prices change you can alter any individual ones later on.

```
                                        RECIPE FILE: RECFILE
NAME:    CHILLI CON CARNE
DATE:    25th December 1987
DAY:     FRIDAY
TIME:    1pm
ROOM:    LLAMA SUITE
SCHEME:

RECIPE NO:    1
 PORTIONS:   24

    INGREDIENT              QUANTITY          COST
                                               £
GROUP B
 GARLIC                          18             0.54
 CUMIN                        30 gms            0.17
                                        GROUP TOTAL = £  0.71
GROUP M
 LEAN MINCE                2.718 kg            10.50
                                        GROUP TOTAL = £ 10.50
GROUP V
 ONIONS                    1.362 kg             0.30
 CHILLIES                        30             1.50
 TOMATOES, PULPED          2.718 kg             1.38
                                        GROUP TOTAL = £  3.18

                                          TOTAL COST = £ 14.39
                    SELLING PRICE (at 50 % profit)= £ 28.77

                                          VAT (at 15 %)= £  4.32
                                           TOTAL PRICE = £ 33.09
```

Anatomy of a product

The path from having a good idea to selling a finished product is not easy. First of all, you have to have a working program. Make sure that it is easy to use, and that it can cope with other people's methods of working as well as your own without needing to modify the actual program code itself.

Now comes the hard part, selling it. You will need a foolproof manual which assumes no computer knowledge at all, but equally isn't too trivial for the expert to use. The manual is very important, and may well take you as long to write as the program itself.

Presentation is important. Typesetting and printing manuals and packaging is expensive, although nice if you can afford it. The best thing to do is to print a master copy of the manual from your PCW (preferably with a daisywheel printer) and then photocopy it onto some classy paper – say a pale Conqueror stock or similar. Photocopying shops can then heat-seal or spiral bind it into a card cover. If you can manage it, a properly printed disc label and inlay card for the disc box will make potential customers think you are a serious professional outfit.

Finally, sell the product. Mail order is the best way, so you'll need to advertise. Bear in mind that all readers of 8000 Plus own PCWs but very few may be in your business, and all readers of your trade paper are in your business but very few may own PCWs. Six of one, half a dozen of the other.

Overall, your material production costs might be around £10 a unit (ie. the basic disc cost plus photocopying), or more if you use professional printers. Of course the development time and cost of your PCW are extra – how much you charge for those is up to you – the 'professions' (solicitors, doctors etc.) will probably be prepared to pay more than shopkeepers and publicans for a program.

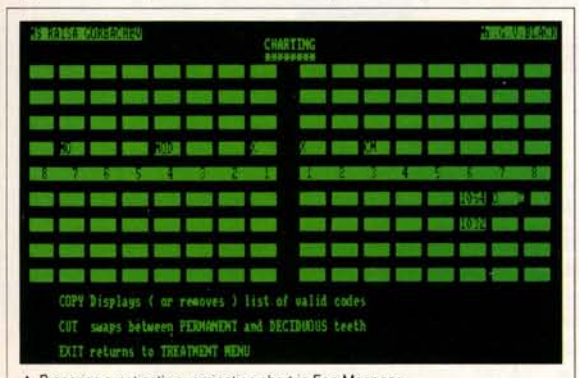
MY LINE?

Second, you start to type in your recipes. You enter each of the ingredients in turn along with the quantity of each needed, and you also tell the program how many portions the quantities you are giving will make, eg. 'feeds 4'. As you type each ingredient's name it is checked against the ingredient database, and if it isn't found you are asked if either you have made a typing mistake or if you want to add the new ingredient to the list.

Once set up – which would take you some time if you have lots of recipes – you can now cost your recipes reliably. After working out the menu for a certain day, you type in the number of mouths to be fed, the dishes to be served and the profit margin needed, and the program will print out a list of what ingredients you need to order and what price you should be charging (it doesn't print formal menus). You also get the option of adding extra ingredients not in the recipe, for a bit of variety. You can store up to 750 ingredients and 400 recipes – disc space permitting – at any one time.

This seems a very handy way of producing lists of ingredients for your menu choices, particularly if someone else has to do the actual buying. You've got to make the effort to keep your price lists up to date with seasonal price fluctuations.

The only real flaw is that the units Requisition chooses as its standards are inflexible. For example, when buying you would probably express the cost of chillis as 180p per lb, although in a recipe you would want to say 'use 4 chillis'. Requisition forces you to express 4 chillis as, say, 0.1 lb in the recipe.



▲ Preparing a patient's examination chart in Fee Manager

FEE MANAGER – Dentistry

£499 ● Practice Systems (061-320 8134) ● 8000s only

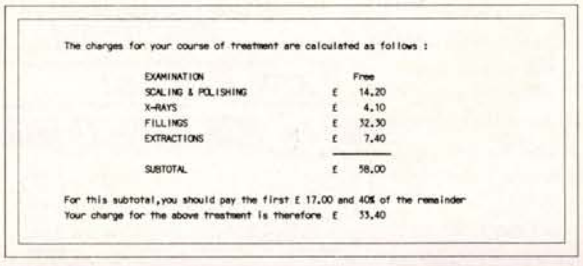
Fee Manager is designed to help NHS dentists keep track of patients' treatments, and to work out how much to charge the patient and how much to claim from the NHS under the constantly-changing rules. It will also print out the details in the appropriate places on the standard FP17 claim form.

The program falls into two stages. First you go through a database-type section where you record patients' personal details, including an on-screen annotated examination chart. Then with the details on file you can print out an estimate for the patient, or an itemised bill. All the charges are NHS standard and are stored in the program as supplied.

A great deal of thought has gone into the manual, and it runs to 200 A5 pages in a ring binder. Obviously it assumes you are *au fait* with dentistry terminology, but takes you pretty clearly through the basic steps of setting up the software.

Fee Manager runs on '8000s only' in that the instructions for lining up the FP17 on the printer are specifically about the 8000 dot matrix printer, and it prints its output in 17-pitch text. In fact, the 9512 will just about work if you fit a Mini Gothic print wheel.

This is the costliest of the specialist packages reviewed, as a result of which its 'Value Verdict' rating suffers in comparison. As you would expect at the price, it is the most professionally presented. It's a bit slow at retrieving data and working out the charges (a 10-second delay is not untypical). Included in the price is six month's support (like program upgrades should the scale of charges change) and setting up the program for your practice personnel. It's a pity there is no way for the user to alter the scale of charges, since you really have to wait for a new version of the program to be issued each time the NHS charges change.



The charges for your course of treatment are calculated as follows :

		Fees
EXAMINATION		
SCALING & POLISHING	£	14.20
X-RAYS	£	4.10
FILLINGS	£	32.30
EXTRACTIONS	£	7.40
SUBTOTAL	£	58.00

For this subtotal, you should pay the first £ 17.00 and 40% of the remainder
Your charge for the above treatment is therefore £ 33.40

9512 tricks

When we say that the software here will run on the 9512, it may involve a bit of work on your part. You will need to copy the programs onto a 9512-disc, and also you will need to set the printer to 'Matrix' rather than 'Daisy' mode. If you don't, all £ signs come out as 'h's.

REQUISITION ● £65

RANGE OF FEATURES	■■■▒▒	SPEED	■■■■▒
EASE OF USE	■■■■▒	DOCUMENTATION	■■■▒▒

8000 PLUS VALUE VERDICT ■■■▒▒

FEE MANAGER ● £499

RANGE OF FEATURES	■■■■▒	SPEED	■■▒▒▒
EASE OF USE	■■■■▒	DOCUMENTATION	■■■■▒

8000 PLUS VALUE VERDICT ■■▒▒▒

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Steve Davis Snooker	£13.50
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PCW DESKTOP PUBLISHING

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The Database Publisher (Software)	£28.75
Database Desktop Publisher (with AMX Mouse)	£67.85

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* available in Blue, Yellow, Pink, Green (£1 extra)
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Locospell for Locoscript II or I	£31.96
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VISA Access

TAXIBASE – Taxi operators

£9.50 ● Mercury (089 283 3056) ● All PCWs

In contrast to much specialist software, Taxibase costs less than £10. It is a very simple program written using BASIC's Jetsam filing system, but very effective for what it sets out to do.

It is designed for taxi companies who need to give telephone quotes on how much a trip will cost. It is essentially a customised database holding details of pick-up and set-down points, customer's details and the charge. Then by looking up the records new customers can be given an estimate based on previous experience, and regular customers can be charged the same each time to avoid embarrassment.

You can search the database very flexibly. It is possible to list all trips by a particular customer, all trips from a certain

pick-up, all trips to a certain set-down, or any combination of these.

Every now and again you will need to clear out dead wood from the records to make way for new customers. How often this happens depends on how big your business is, but Taxibase copes with this procedure fairly happily.

The manual is brief but adequate. A few illustrations of typical screen shots would have been nice. Even though the package is cheap, Mercury say they are pleased to give telephone support to users.

Although we could only test it in a fairly small customer list (50 or so names), the speed seemed to be good enough so that you could look up records of old quotes in a couple of seconds while talking on the phone. Definitely a good value program.

MCGREGOR ESTIMATOR – Builders

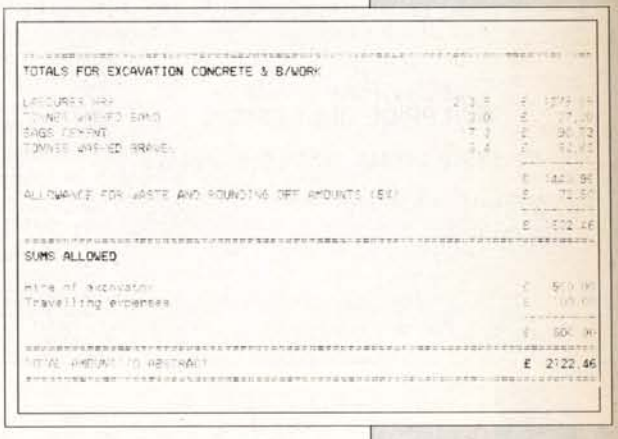
£99 ● McGregor Software (0387 88612) ● All PCWs

This is a program to help builders estimate how much a job will cost. It is quite sophisticated in what it knows about the building trade – but then it's written by a firm of builders.

When quoting for a contract, you naturally split your estimating into excavating, concrete work, walling and so on. The program is totally menu-driven, so you position the cursor bar over the option you want and press [ENTER]. Suppose you are doing walling: once into the walling section, you are presented with a menu of possible building materials, and you just choose the right one. Then you type in the dimensions, and the program automatically calculates the materials needed.

The start-up disc always copies its files to the M drive every time you run the program, which takes a minute or so. There is a lot of built-in data, saving you typing in facts yourself. For instance, on specifying a certain amount of concrete mix, the estimate will convert this for you into the relevant amounts of sand, gravel and cement.

The labour times for particular jobs are built-in, so once you've fixed the area to be excavated, for example, the man-hours required are calculated. You can adjust times to suit your own working practices, as you can adjust the prices of materials. Finally, an itemised estimate is printed out, in varying levels of details as you request.



Overall, the building estimator is a well designed package. The only possible problems would crop up if you use unusual building methods or materials not catered for in the predefined options menus, although McGregor Software say they will happily talk to customers with special requirements.

STOCK CONTROL/ACCOUNTS – Licensees

£69.52/£86.91 ● GT Micros (0604 810720) ● All PCWs

A package to help those involved in the licensed trade keep tabs on their levels of stock and necessary re-orders. GT provide two programs, stock control and accounts separately, or you can buy the two combined for £156.43 (plus VAT).

The package runs simply from a series of menus and prompts, although it does suffer by bleeping furiously at you every time it prints anything on the screen to be read. The stock control allows you to enter various categories such as beers, spirits, cigarettes, snacks in terms of their size (eg. 1.5l bottle), cost price, sales price, opening and closing stock. It then works out the cumulative profits and stock movements to help you reorder. The accounts section of the package is well-suited to a cash operation, and like all accounts software assists rather than replaces your auditing process.

The documentation is the weak aspect of this system. The get-you-going instructions are printed on the package itself, but there is no paper manual. Instead there are about 10 screens of text which you can read and print out. Text files on disc are never as satisfactory as paper manuals.

GT Micros claim a base of 60 satisfied users all over the country to their credit. Several of them have agreed to talk to prospective buyers who might want to know the practicalities of the system in a pub. GT offer a range of related services like a telephone support service running up to 11 pm,

TAXIBASE ● £9.50

RANGE OF FEATURES	■■■■■	SPEED	■■■■■
EASE OF USE	■■■■■	DOCUMENTATION	■■■■■

8000 PLUS VALUE VERDICT ■■■■■

MCGREGOR ESTIMATOR ● £99

RANGE OF FEATURES	■■■■■	SPEED	■■■■■
EASE OF USE	■■■■■	DOCUMENTATION	■■■■■

8000 PLUS VALUE VERDICT ■■■■■

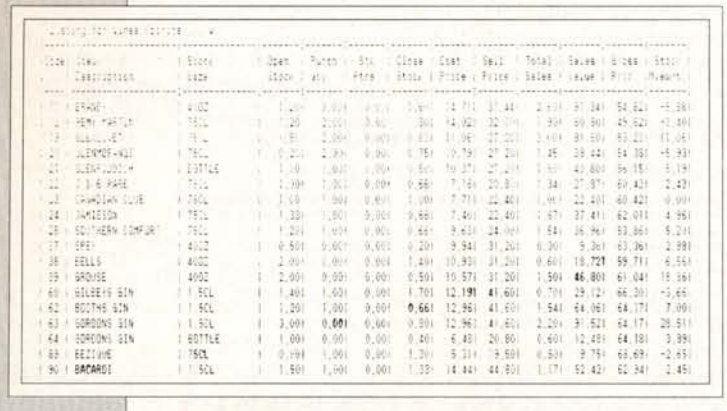
Words of wisdom

The packages mentioned in this article are in all probability only a small fraction of the specialist software around, but as far as we are aware it is a fair representation of the ongoing situation at this moment in time.

Don't forget that if you do buy a program for your business, specialist or general, you will need to spend a few days getting used to it, and you may even need to adapt your working practices slightly to fit in with the program.

The only way to get a system which is totally suited to your own business is to write it yourself. As a general piece of advice, if you are a confident programmer then by all means do this, the PCW's Mallard BASIC is a good system for most applications. If you haven't done much programming before, then on no account should you consider writing any major programs on which your business will depend – big programs take months to write and never work first time.

A final option is to commission someone to write a program for you. This isn't necessarily ruinously expensive, maybe costing £100 to £500 depending on complexity, but make sure the programmer is competent (ask to speak to some of his previous clients) and insist on getting good documentation and after-sales support at the end. If the program is of general interest, make sure that if you have paid someone to write it they don't sell further copies of it without giving you a cut!



installing a complete PCW system including the hardware, and they will do the time-consuming task of typing in your initial stock levels too.

TIMEDATA – Solicitors

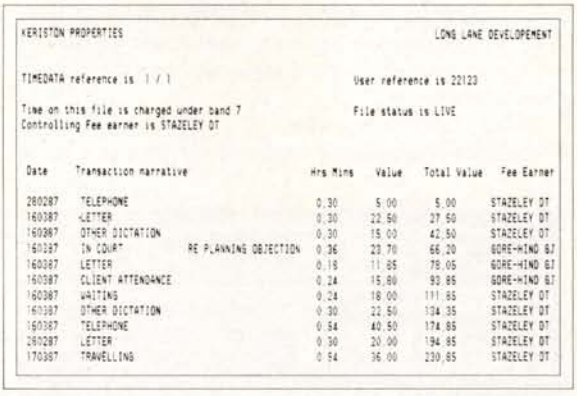
£95.00 ● Appropriate Technology (0602 222352) ● 8512/9512 only

Timedata is a program designed for use by a solicitor's practice. It is effectively a database of which people have spent how much time on certain client accounts, and it also provides useful summaries and statistics on the data.

The package needs an 8512 to run on, since it specifically keeps its data on a B-drive disc. Up to 10 fee earners can be incorporated into the system, with two or three people per disc. In other words you might use 5 data discs for a complete 10 solicitor practice. It claims to cope with up to 700 client files and almost 15,000 transactions per disc, and any number of discs can be used.

Time is charged in 6 minute units, and each unit is assigned to one of ten charge categories (eg. 'travelling', 'in court') which can be set up as is convenient. Timedata is designed as an internal monitoring and accounting aid, so it does not actually print out client invoices.

Part of the program is a section to calculate what you ought to be charging per time unit for each fee earner. This is based on the Law Society's standard instructions, and you are asked to give details of the practice's expenses, everyone's salaries etc. Being confidential information, this



KERISTON PROPERTIES — LONG LANE DEVELOPEMENT

TIMEDATA reference is 1 / 1 — User reference is 22123

Time on this file is charged under band 7 — File status is LIVE
Controlling Fee earner is STAZELEY DT

Date	Transaction narrative		Hrs	Mins	Value	Total Value	Fee Earner
280287	TELEPHONE		0	30	5.00	5.00	STAZELEY DT
160387	LETTER		0	30	22.50	27.50	STAZELEY DT
160387	OTHER DICTATION		0	30	15.00	42.50	STAZELEY DT
160387	IN COURT	RE PLANNING OBJECTION	0	36	23.70	66.20	GORE-HIND GJ
160387	LETTER		0	18	11.85	78.05	GORE-HIND GJ
160387	CLIENT ATTENDANCE		0	24	15.80	93.85	GORE-HIND GJ
160387	WAITING		0	24	18.00	111.85	STAZELEY DT
160387	OTHER DICTATION		0	30	22.50	134.35	STAZELEY DT
160387	TELEPHONE		0	54	40.50	174.85	STAZELEY DT
280287	LETTER		0	30	20.00	194.85	STAZELEY DT
170387	TRAVELLING		0	54	36.00	230.85	STAZELEY DT

section does not appear on the program menus, and you have to get to it via a series of almost Masonically obscure passwords and codes!

The manual is clearly worded and very good. With the package you get 4 discs: the program, a backup copy, a demonstration data disc and a blank data disc for your use. You also get some printer paper and a filing binder. For an fee, Appropriate Technology will install the system for you.

Timedata seems a well designed piece of software. As long as it fits your billing practices, it should prove good value.

Name Dropping

There's a lot of specialist software around, and we haven't been able to test all of it. Among the other professions catered for in the world of PCW software are (all prices exclude VAT):

Farming Sum-It Computer Systems (024 027 238) sell a range of packages specially for farmers. In addition to an accounts program at £400 and payroll at £200, there is a range of specialist management programs. At £350 each, yours is the choice of Field Management (fertiliser planning etc.), Herd Management (covering dairy and calving recording), Cattle Management (livestock buying and selling), Sheep Management, and finally Pig Management. Sum-It's software needs a printer capable of condensed print, so as ever you could get by with a 9512 and Mini Gothic daisywheel, but an 8256/8512 is better.

Newsagents MG Consultancy (1 Second Avenue, Grimsby, South Humberside DN33 1DF) offer *Datanews*, a program at £75 which claims to store details of up to 99 different delivery rounds to 9999 customers. It allows for customer holiday breaks, and of course deals with invoicing, adding cigarettes or sweets to the account, and spotting overdue debts.

Video hiring Also from MG Consultancy is *Video Manager* (£30), covering stock inventories, membership records, Top 50 hire charts, VHS/Beta/Other format recordings, and noting privileged or blacklisted members.

With the low-cost PCW machines, Amstrad have managed to put computers into businesses of all sizes. The next part of the computer revolution is to make sure everyone has the right software for their needs – let's hope the programs in this article are only the start.

STOCK CONTROL/ACCOUNTS ● £69.52/£86.91

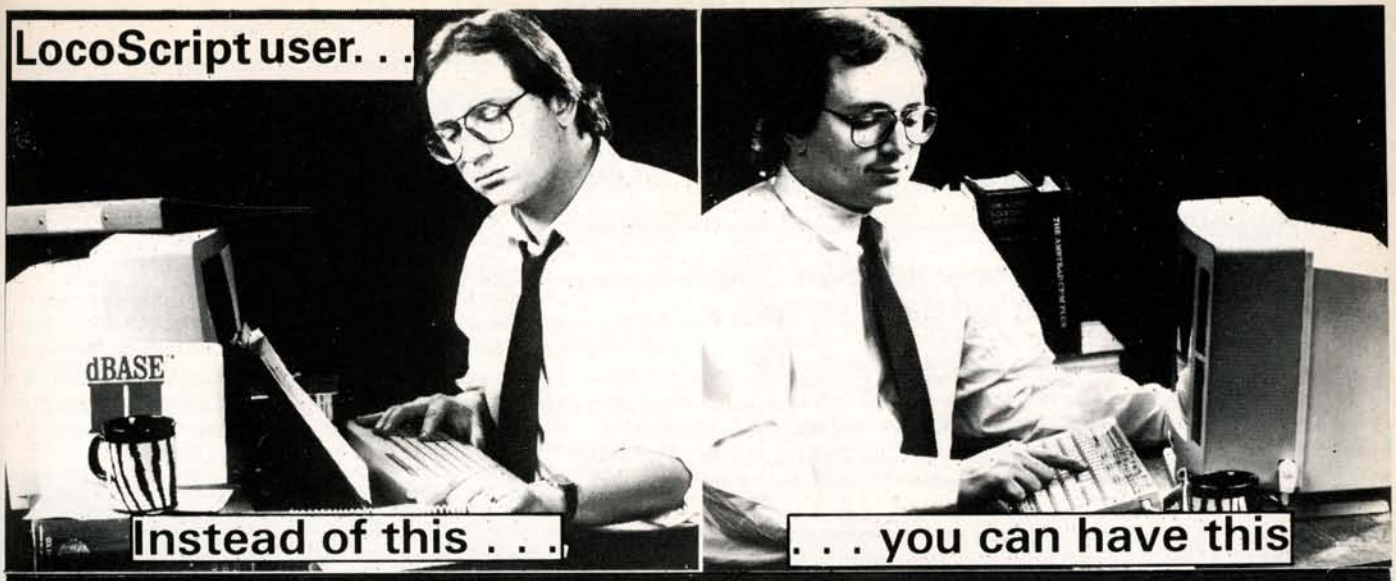
RANGE OF FEATURES ■■■■■ SPEED ■■■■■
EASE OF USE ■■■■■ DOCUMENTATION ■■■■■

8000 PLUS VALUE VERDICT ■■■■■

TIMEDATA ● £95

RANGE OF FEATURES ■■■■■ SPEED ■■■■■
EASE OF USE ■■■■■ DOCUMENTATION ■■■■■

8000 PLUS VALUE VERDICT ■■■■■



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Never forget another command with Menu-mate™ Templates to remind you. Save time and end frustration because commands and simple instructions are at your fingertips for quick and easy reference.

Richman Software's Menu-Mate™ is easier to use than books or reference cards, the facts are complete, properly organised to help you and available at a glance.

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Why press six keys when two will do the same job?

See the exact appearance of your letter *as you type it* . . . no more guesswork.

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Never lose work because it wasn't saved. Menu-Mate™ acts as a constant reminder *and shows you how*!

Shows special features of Locoscript almost unknown.

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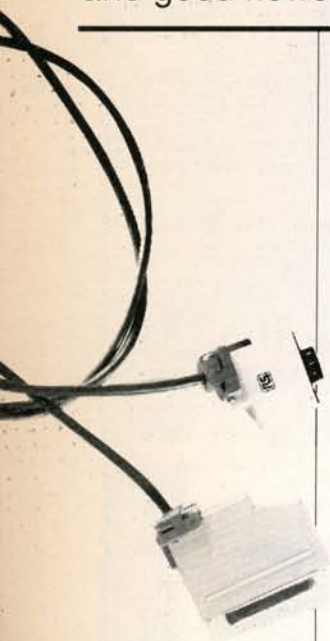
Allow 21 days delivery
Major credit cards accepted

8000 PLUS

QUICKIES!

Mini reviews bringing new PCW typefaces for old, and good news for Z88 owners



Z88-PCW Import/Export Utility

£24.95 ● C Port Ltd (01-376 5098) ● All PCWs

It is a sign of how popular the Z88 portable computer has become to PCW owners that C Port have launched a new utility especially to help move files from one machine to the other. Called the "Z88-PCW Import/Export Utility" (we'll call it Impex) the most complicated thing about it seems to be its title.

For your money you get a cable to join your Z88 to your PCW, a disc with software and a manual. You still need your own PCW serial interface, costing around £60, so the total package could add around £90 to the real cost of your Z88.

Apart from the cable you don't really *need* any of this package. Anyone reasonably conversant with PIP should be able to transfer files without Impex quite successfully. However, using PIP can cause utter panic and confusion in some users and many will pay £24.95 quite happily rather than face the intricacies of the PCW and the Z88 manuals – two documents unlikely to rank high in the Top Ten most readable books of the year.

Strangely enough with Impex the manual is probably of more use than the software. It takes you carefully through every possible combination in simple terms and great detail. You can pass text and program ("binary") files back and forward between the two machines using the Z88's 'batch send' and CP/M's wildcards (like send '*.DOC'). You, can't directly send LocoScript files to the Z88 – you need to go through an ASCII file, although the manual takes you through the required stages fairly clearly.

Impex takes care of details like recognising the names of files being sent from the Z88, which PIP could never do, and allows you to choose whether to overwrite an existing file of the same name. It is in these details that Impex wins. With PIP you can get a file into the Z88 without much problem but would you be able to get it to the correct RAM pack? With Impex that is no problem.

Another of Impex's features is that it allows you to print directly from the Z88 to the PCW's printer. Even so, most PCW users would be well advised to load a text file into the comparatively friendly environment of their PCW word processor to get things right before printing.

RANGE OF FEATURES ■■■■■ PERFORMANCE ■■■■■
EASE OF USE ■■■■■ DOCUMENTATION ■■■■■
8000 PLUS VALUE VERDICT ■■■■■

SUPERTYPE II

£24.95 (£12.50 for upgrade) ● Digita International (03954 5059) ● 8000s only

The original SuperType was a great idea. Instead of churning out the same old boring PCW typeface you could choose one of eight different faces (four business and four exotic) and pretend that you had something more grand than a PCW. It worked in CP/M and marvellously enough in LocoScript too.

One thing always spoilt it however. You could only have one font per LocoScript disc, so to use all eight fonts you really had to set aside both sides of four discs, one side for each font, and restart with the new disc every time you wanted to change typeface.

Now, with SuperType II specially designed for LocoScript 2 users, life is decidedly easier, although you still can't have all eight fonts available at all times. LocoScript 2 can handle all kinds of printers using up to four 'printer drivers' – the information necessary to let the computer run a printer.

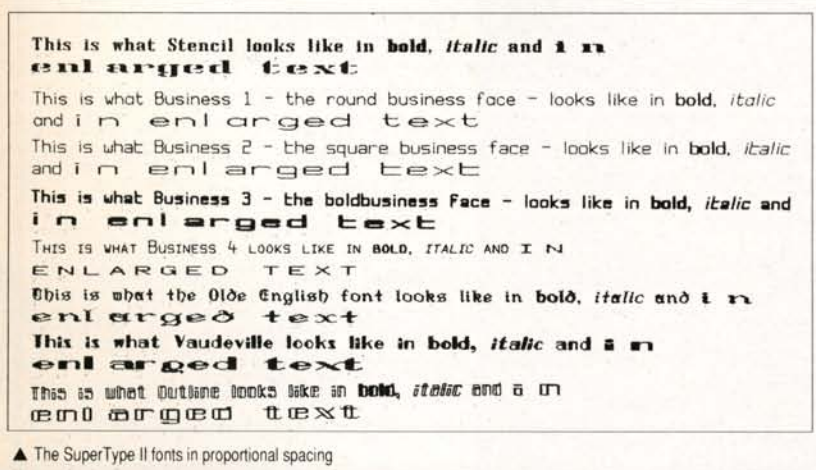
What SuperType II does is pretend that its fonts are printer drivers allowing you to keep and use up to four fonts on a disc, subject to having a big enough M drive.

There were some problems with the early versions of SuperType in handling proportional spacing, when the letter spacing looked a bit strange. Not only have they overcome these problems, they now positively advise you to use proportional spacing to get the text looking right.

The fonts are attractive even if the customary Olde English is not too easy to read. The business faces are clear and business-like and have the advantage of being distinctly different from the Amstrad font, although whether a special bold font is needed given that you can print any other face in bold is debatable.

Stencil, Outline and Vaudeville (presumably because it's 'jazzy') are all eye catching although could be wearing for long stretches of text.

You still can't change typefaces in one document but at least now you don't have to restart every time you want to change. With a bit of practice it is not too difficult to achieve interesting effects.



▲ The SuperType II fonts in proportional spacing

RANGE OF FEATURES ■■■■■ PERFORMANCE ■■■■■
EASE OF USE ■■■■■ DOCUMENTATION ■■■■■
8000 PLUS VALUE VERDICT ■■■■■

cp software

NEW

CLOCK CHESS 88

CLOCK CHESS 88 is the **strongest** and **most versatile** chess program yet for your PCW computer. It has the **most advanced 3D graphics**, the widest range of options, the **power to play incredibly fast** and the **intelligence to selectively search deep into the position.**
CLOCK CHESS 88 has been tested against a wide range of other chess programs **and has shown itself to be stronger than any of them.**

Written using the latest techniques CLOCK CHESS 88 does not use the usual "brute force" method of searching for the best move, but instead is **packed with chess knowledge** which uniquely allows it to search only those moves which are "sensible" or "interesting" and not to waste time analysing lines of play which it regards as "stupid". In addition it has a **variable search depth** which results in a deeper search of interesting or active lines, thus **reaching those parts that other chess programs cannot.**

- **massive** 44,000 byte openings library (user extendable)
- **stunning** 3-D graphics
- **annihilates other PCW chess programs.**
- **largest range of options**, cursor controlled for easy move input
- special easy mode for beginners
- full display of its thought processes gives you a fascinating insight into its search mechanism
- perfect understanding of all the rules of chess including underpromotion, draw by repetition and the fifty move rule.
- achieves all the standard mates including those occuring with minor pieces in the endgame - **well able to handle difficult pawn endings**
- makes full use of the extra memory of the 256K and 512K PCW

This is what reviewers said about the original Clock Chess, and this new version is even better :

"magificent display ... feeling of playing a real chess match" - **Computing with the Amstrad**

"clearer display ... plays a stronger game" - **Putting your Amstrad to work**

" all the features needed, tough game, very well done 3D effect" - **Amstrad Action**

CLOCK CHESS 88 IS COMPATIBLE WITH ALL PCWs **£15.95**

NEW

all you ever wanted to know - *PLUS* - about GRAPHICS, THE UNIVERSE AND EVERYTHING FOR PCW but were afraid to ask

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- Create **User Defined Graphics.**
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- Experiment with sound routines.
- **Directly access Video Ram.**
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Comprehensive manual plus detailed documented source code.

"ALL YOU EVER.." as used by Starglider authors, Real Time Software
"An excellent package, well described, fast, good manual, very versatile" **8000 Plus**
"Makes it easy to create complex looking graphics, the best package I have used" **Popular Computing Weekly**

"ALL YOU EVER + " IS COMPATIBLE WITH ALL PCWs **£24.95**
Upgrade only ..... (Return old disc) **£12.95**

BRIDGE PLAYER 2000 WITH TUTOR

THIS IS THE BRIDGE PLAYER for both the expert and beginner, with versatile bidding that sets a really high standard, matched by powerful card play.
Generates random hands and allows proper bidding in the ACOL system, using STAYMAN, BLACKWOOD and a choice of NO-TRUMP conventions.
Integral Tutorial section with 20 set hands, advice and explanation. Massive range of options and comprehensive information displays.

*"The program is **very well thought through** and serves a dual function. First of all, if you want to learn how to play then you can do so easily in Tutor mode, and secondly, if you can play but can't find three others to play with, then here's your chance to keep your hand in using Player mode....*
***The Tutor** teaches you the game as you play by ensuring that you don't make wrong moves. At the end of the game you get a full page of text analysing the whole game, explaining the bidding process and sequence of play, together with an analysis of underlying tricks and possibly alternative ways to outflank your opponents...*
***In the Player mode** there's a **wide range** of restart and go back one move options which ensure **you can learn something new each time...** The display is fine, the table sits in the middle and you play your round with lots of info about the last trick and the score displayed around the edge of the screen....* This is a very thoughtful way to get the most out of Bridge on the computer..... **Bridge Player 2000 is a good one"** PC Plus.

"Large and simply explained Tutorial, easy for beginners, could easily keep a Bridge player occupied for the rest of eternity" **8000 Plus**

BRIDGE PLAYER 2000 IS COMPATIBLE WITH ALL PCWs **£15.95**

NEW

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70+ NEW BASIC KEYWORDS AND 100% PCW COMPATIBILITY, THE ULTIMATE PCW MALLARD BASIC EXTENSION.
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Many original features provide the ideal environment for the Basic programmer.

- high and medium resolution graphics, plots, lines, circles, fills
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- User Definable Graphics, new character sets
- new editing facilities, **variable list**, search etc.
- save screens and instant multi-screen recall
- full A4 screen dump to dot matrix printer
- timer, sound routines etc. etc.
- easy cursor and printer control
- all functions use simple-to-use BASIC keywords
- masses of demonstration programs supplied on disc
- *" knocks spots off other basics ! "*

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THE LAST BATTLE

AMS's new desktop publisher is finally here, waging war on its three rivals. Alec Rae checks out its firepower.

STOP PRESS

£49.99 (with mouse £89.99)
● AMS (0925 413501) ● All PCWs

The one thing that Stop Press, AMS's new desk-top publishing package, can show the software industry is that even when a market looks over-crowded you can still find a niche by taking a new and imaginative approach.

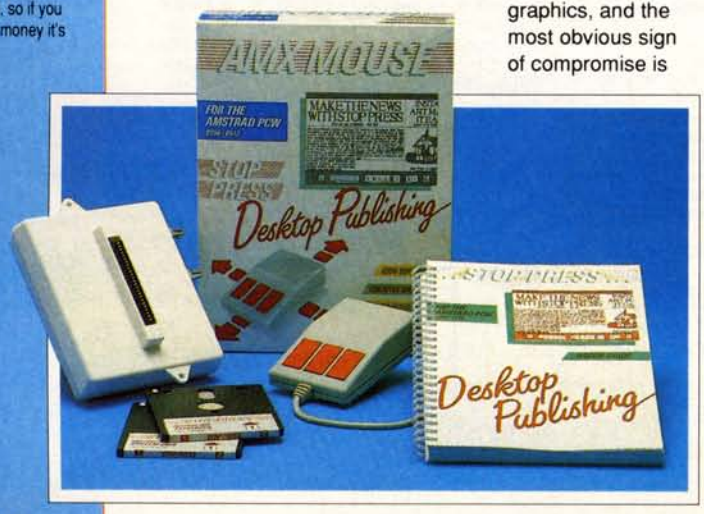
There are people producing newsletters for clubs and churches who have found the DTP revolution a god-send neat presentation with one or two illustrations can turn a boring article into a best-seller. But not many people would consider producing a large number of pages regularly on the PCW. The length of time the printer takes to print out a single page would mean that you would have missed your deadline before page three was completed.

On the other hand there are many times when you would gladly use a piece of graphics to brighten up a long report or even just give it an extra bit of interest with a fancy font. All desk top publishing programs can do this of course, but Stop Press allows you to do it with real flair. Stop Press is aimed not just at the laying out of two-column parish newsletters but also works well producing slick advertising fly-sheets, impressive letter-heads, fun party-invitations, exciting circulars or even just brighter business reports.

Let's compromise

There is, of course, only so much program that can be packed into the limited space of a PCW and with a complicated concept like desktop publishing this means making compromises.

The choice is whether to use the available space to concentrate on graphics and design or on text handling. Stop Press definitely puts the emphasis on design and graphics, and the most obvious sign of compromise is the fact that unlike its competitors it doesn't have an inbuilt text editor.



Instead of editing the text in the program you prepare all your files in LocoScript (either 1 or 2 will do). Having perfected the grammar and spelling in friendly, familiar surroundings you mark all the italics, bold, underlining and reverse text with the usual LocoScript codes. The program picks all these up correctly although it can't handle codes like centring or different pitch sizes. You can try text files from other word processors although these have varied results and won't allow you to put in the emphasis codes (which has to be done within Stop Press).

You can then set the number and size of the columns you want on your page (up to 9) and run the text in. You can set windows to confine the text in a certain area or you can stop the flow of text by pressing [EXIT] – it usually stops at the end of the next line. And of course it stops automatically at the bottom of a page. You can then move on to the next column or you can save that page and start another page to take the overflow.

There are some very sophisticated features governing how the text is laid out in the columns. You can automatically centre everything, have it 'ragged right' (the words normally spaced set against the margin on the left) 'ragged left' (the text set hard against the right margin) or justified (the letters spaced to completely fill the line).

Then there is the ultimate feature – 'autoflow', which allows you to place a piece of graphics in a column of text and run the text around the edge of the picture to fit it. With an irregularly shaped illustration using justified text this looks particularly impressive and is popular with all the modern computer designed newspapers and magazines who want to show off what their systems can do.

Oops!

In theory this should all work beautifully if you don't take into account Sod's Law of Desktop Publishing – "You never see

For mouse haters

Stop Press will work by keyboard control alone – you can move the cursor around the screen and select from menus by using the arrow keys. However, it is much easier with a mouse, so if you can afford the extra money it's well worth it.

the last spelling mistake until too late".

Once text is on the screen it is treated as graphics, ie. just a pattern of dots on the screen. You can't edit text as such, but you can blank over an unwanted paragraph and manually move the rest of the text up to fit. Similarly, you can correct spelling errors by writing a blank area over the mis-spelt word and then 'patching' a corrected version over. Problems only occur if the correction won't fit the space or when you've used justified text and there are odd spaces that are difficult to reproduce.

However you can face major problems in placing text files on the page if things go wrong. When you are learning any system you are inclined to make mistakes. Normally this is no problem but if for instance you start filling the third or fourth column on a page which happens to have an illustration in it without putting autoflow on the words run right over the picture and you have lost your place in the text file. The only answer seems to be to close the file and start again. The moral is, before any major text placing operation save your current version so that if anything goes wrong you can have another go.

There is another minor niggle in some of the settings that Stop Press has as its defaults (ie. the ones it uses unless you tell it otherwise). The program assumes that any text should be centred in the columns – not the most natural way to handle body text.

Which face today?

On the other hand experimenting or 'lucky accidents' will also produce some startling effects that often do just as well. The greatest boon for this is the 'undo' facility which will put experiments back to where they were. This does not always work – specifically you can't undo the placing of text which has gone wrong – but even if it doesn't it is not too difficult to erase the part of the screen that has gone wrong and starting again.

You can divide the page up into columns of equal size, an extremely useful feature, but allowing for up to nine columns seems a bit like overkill. On the normal A4 page even six columns would be getting a bit narrow although someone will probably find the nine column format ideal for laying out charts or tables.

The normal Amstrad screen typeface is also loaded automatically for body text, but if you would prefer there are a couple of small fonts that are available.

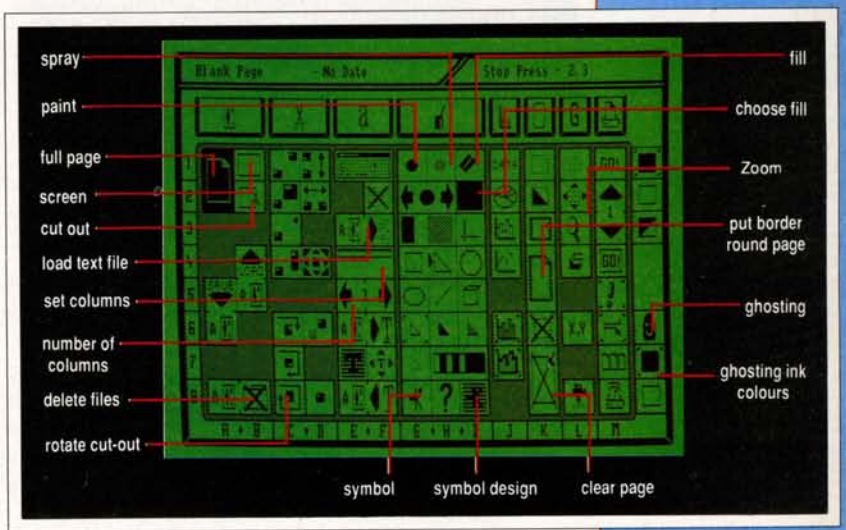
A major problem for any page designer is making everything fit. The main worry is whether a piece of text will fill a space – a situation that is admittedly better catered for in other DTP packages. If you have too much text one answer is to run it to another page (the 'continued on p94' trick). A Stop Press document can only be one page, so you have to have a separate file for each page of your publication, although arranging for the overmatter from one page to run onto another is easy.

Head too big?

One area where you can get a lot of fun and produce interesting results is in writing headlines. There are 14 different fonts giving a wide variety of styles. Admittedly not all of them would be suitable for a normal newspaper format – a banner headline in Futurist or Old English might not have the immediate legibility that most editors would want. But there are some solid business type faces mixed in with these more exotic faces which are really intended for fancy invitations or letter-heads.

Stop Press is particularly good at tackling the constant battle of getting the headline to fit the space available. Each type face takes up a different amount of space; there are 18 different text sizes and the width and height of each face can be independently adjusted to produce "tall thin" or "short fat" versions, so you should find a suitable face that comes near.

There are sensible fonts
AND THERE ARE EXOTIC FONTS
And of course the statutory Old English font
So Whatever You Want You will find
One to Suit –
And if it doesn't quite fit you can tip it a bit
Or else Stretch it to fit



On the menu

It has to be admitted that Stop Press offers so many facilities that it could be quite frightening for the beginner. To overcome this the designers have come up with an ingenious double method of giving commands.

The main way to select functions like draw, fill, read a text file is by pressing a couple of buttons on the mouse to produce a screen-size menu. Every feature is represented by an 'icon' (a memory-jogging picture). Some of the icons are not too obvious at first sight – for instance there are five which are subtle variations of a disc drive, and working out which is the one to load a file isn't obvious. But even the most entrenched 'manual ignorer' should get the hang of things by trying out each icon methodically. And if all else fails the manual is quite well written and attractively presented.

Once you've got used to Stop Press, having to call up the menu each time is tiresome, so every icon is given a grid reference by its row and column on the menu. You can do a function directly without bringing the menu up (like LocoScript's [+] key command shortcuts) by just pressing the two keys of the grid reference, eg. 'L4'.

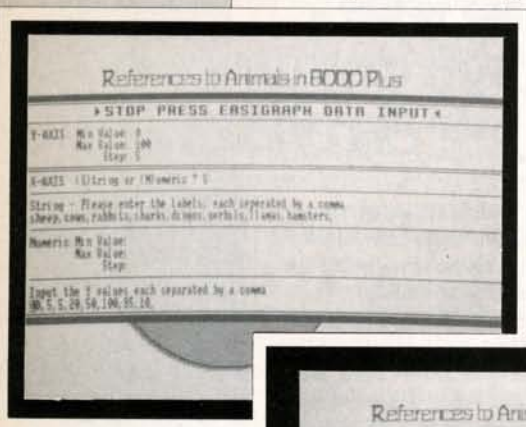
Once you have chosen your typeface and size you can adjust things further by changing the 'kerning' (the space between the letters) to give a properly proportionally spaced feel, and/or the 'leading' (the space between the lines). One slight problem with the kerning option in a heading is that it is inclined to cut down the space between words so much that they seem to run into one another – easy enough to get over by typing several spaces between words.

Take a graph

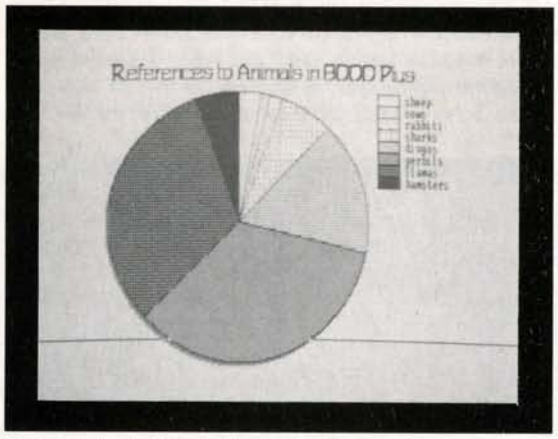
One feature that is sure to cause interest is 'Easigraph', which at last provides a relatively easy method of presenting data graphically on the PCW.

Judging by our postbag, a large number of PCW users are looking for reasonable graph drawing package but many previous attempts have either failed through trying to cover every eventuality and therefore being too complicated or making life easy and being too primitive.

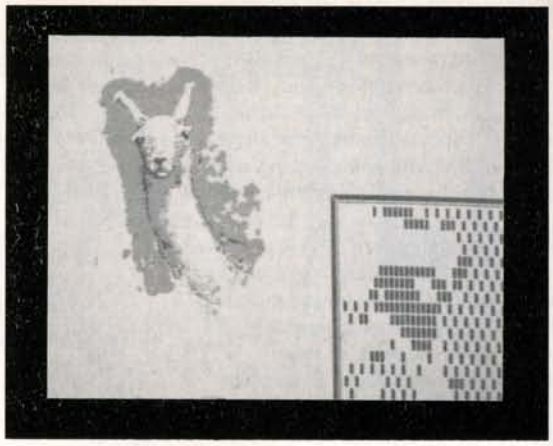
The Stop Press graph drawer is quite simple and there is a full example already loaded to let you see how things work. You just type in the numbers to be charted and choose the options of Pie Chart, Bar Chart (or 'Histogram') or ordinary line graph. Stop Press then places your chart anywhere you want on the page and if you cannot find how to achieve exactly what you want by way of a graph you can add to or modify the resulting graph to suit. One option is to leave the areas of the bar or pie charts blank so that you can pick whichever 'fill' patterns for them you like.



▲ You use the same screen to enter the data for all the different types of graphs and pie charts



▲ The finished product. How the information looks in the form of a pie chart



▲ You can see the effects of your changes as you use the zoom

Pixels

When you display graphics on a computer screen, they are made up of thousands of dots which are either on or off. These dots are called 'pixels' (short for 'picture elements'). If you look closely in LocoScript or CP/M, you will see that each character is made up on an array of 8 by 8 pixels.

Graphics power

Without doubt however, the strength of the program comes from the graphics section which is in fact better than any of the 'stand alone' graphics packages on the PCW. It is well designed and easy to use and carries most of the features you could want from it.

There is quite a range of clip art provided with the program, and the designers have taken a sensible attitude choosing the sort of digitised pictures that would come in really useful for club newsletters, such as rugby posts or a badminton racket for instance. But if you get bored with these you can adapt them (or any piece of graphics), overlaying text and adding new features.

For those times when you don't have a suitable clip art or digitised illustration to brighten up your text you can go away and draw it. You don't necessarily need to be 'artistic' to get something out of Stop Press. It has all the shape drawing facilities you want (triangles, squares, cubes, circles and ellipses) which can be empty, black or filled with a pattern as you require and you can 'fill' any shapes with one of 64 patterns.

There is a solidity about the graphics and a precision that makes detailed work easy. The zoom facility is particularly good. You position it easily where you want on the screen and the 'zoomed' part shows up in a window at the bottom of the page so you can see the effect of changes as they happen. The cursor is very steady under the mouse's control so picking any spot exactly is easy.

You can design your own area fill patterns, and people using the program for technical drawing can design their own special symbols. Electronic circuits would be easy if you had the symbol for a transistor defined which can easily be placed anywhere you want on a diagram.

'Ghosting' is a real fun feature. It simply allows you to superimpose one image with another. Every image is made up of a mixture of black and white pixels (black and green on 8000 series screens!) and the trick with ghosting is that you can superimpose shaded fill patterns on solid objects to give a grey effect, or ghost a picture with itself to make a shadow – this gives a three dimensional look to an image.

Text or graphics?

But even more important from a DTP point of view is the way that you can use the graphics package to increase the flexibility of the other sections of the package.

How does it compare?

So there are four desktop publishing programs out for the PCW: in order of appearance, Newsdesk International (Electric Studio, £39.95), Fleet Street Editor Plus (Mirrorsoft, £59.95), The Desktop Publisher (Database, £29.95) and now Stop Press (AMS, £49.95). Is any of them clearly the best?

As with all things in life, there is no simple answer. Two things are for sure though: Stop Press will kill Newsdesk stone dead – it does all that Newsdesk does and more, and does it better. Also, The Desktop Publisher has pretty much killed Fleet Street Editor – it is more reliable, has more readable body text, and is simpler to use.

So really the two contenders are Stop Press (£49.95) and The Desktop Publisher (£29.95). The difference between the two is that The Desktop Publisher is very text oriented – you can actually edit text in the columns on the made-up page. However, its headline fonts are very basic and jagged. Stop Press is much more graphics oriented, and allows you to create some stunning visual effects on the page.

If you need to be able to edit the body text of articles much on-screen, you may find TDP more convenient, but for creating impressive headlines and illustrations, Stop Press is the winner. Why not get both!

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Stop Press compatibility

The recent DTP boom on the PCW has meant that there are a large variety of different manufacturers marketing different digitisers, mice, software and so on. To their credit, AMS have tried to make Stop Press compatible with as many as possible of these third-party items, not just with their own products.

Stop Press can of course be driven with an AMX Mouse, and the Kempston mouse also works (although only having two buttons rather than AMX's three means you have to use the [DOC] key as the third one). The Electric Studio Light Pen and Mouse and the Trojan Light Pen will not work as input devices.

Stop Press can read most graphics files which are stored as pixel-for-pixel screen images. This means it should work with pictures produced by MasterScan, MasterPaint, Electric Studio Art, Draughtsman, and the Rombo and Electric Studio video digitisers. Also, graphics (but not necessarily made-up pages) stored by Fleet Street Editor Plus, Newsdesk International and The Desktop Publisher should be OK.

Picture files stored by DR Graph, DR Draw, Microdraft and Grafpad will not work (these use special format files, not screen pixel images).

Everything on screen can be handled like a piece of graphics. Just as you can rotate a picture in 90° turns, double its size or reverse it you can do the same with a headline, or a piece of text giving an almost endless variety of design 'tricks.'

But this has a far more practical purpose for those few moments of life when things go just a little wrong. If you put a piece of text in the wrong place you just move it to the right spot like a piece of graphics. The program adds a lot of guide-lines to help you line things up just right, and even if you just get it slightly wrong there is a 'slip and slide' option which allows you to fine-tune the position until it is spot on.

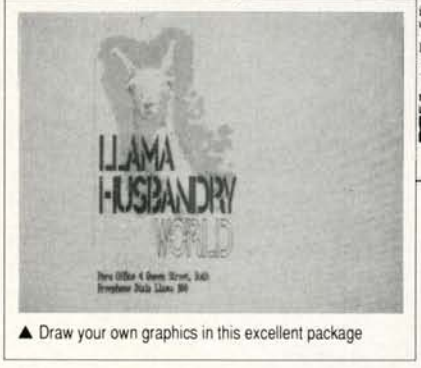
Headlines can be written in any of the fill patterns and you can use ghosting to make headlines and reversed boxes more interesting.

The final product

Printing out a DTP produced page is never quick on the PCW, and Stop Press is not really any quicker than its rivals (it takes about 20 minutes a page.) However the program does allow you to specify how many of copies of each page (up to 9) and to choose how many different pages you want to print. On an 8512 or a 9512 you can save up to 12 pages on a disc (3 on an 8256 disc) so in theory you could set the machine to print a total of 108 pages (while you were away your holidays presumably) although whether the printer ribbon could stand this is debatable.

Stop Press will run on a 9512 using an 'Epson compatible' dot matrix printer – virtually all dot matrix printers will work. All you have to do is, before running Stop Press, give the CP/M command `DEVICE LST:=CEN`. Converting the Stop Press work discs onto 9512 format is not hard, but isn't covered in the manual (which assumes auto-booting 8000 series discs) at all, so you need a bit of intelligence.

Normally you would really want to print out a single page and photocopy it. It produces a quite reasonable quality of print-out with an even texture.



▲ Draw your own graphics in this excellent package

Buglings and bogglings

With any program as complicated as Stop Press you would expect to find a few bugs in the first version. In fact the only bug we discovered during the review was a problem with running text into the last column on a page. The program seems to think there are two very narrow rogue columns between the last two you set up, so if you aren't careful you get text running into those.

AMS say they have fixed this problem, and they will produce a corrected program which will be available free to anybody who buys the early version. However, another problem which is apparently harder for them to fix is to do with taking graphics from non-AMS systems. Loading full screens (like from MasterScan) works fine, but although the manual claims that Stop Press can read the clip-art files from the other desktop publisher programs, it doesn't.

Notwithstanding these niggles, Stop Press is an excellent package that gives wide scope for page design of all kinds. The graphics design facilities are so good that people already using other DTP packages might consider buying Stop Press to use in conjunction with more text biased programs.

EXIT

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- Excellent graphics facilities, as good as any dedicated graphics package
- Wide variety of novel headline type styles
- Menu and key commands suit both the beginner and the expert.
- Sophisticated text handling features like autoflow.
- 'Easigraph' makes putting graphs in documents simple

MINUSES

- No text editing ability
- Undoing wrongly placed text can be tricky

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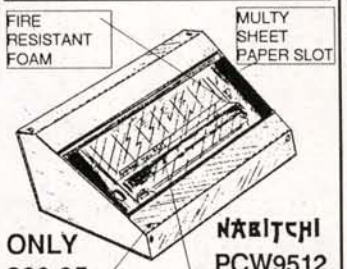

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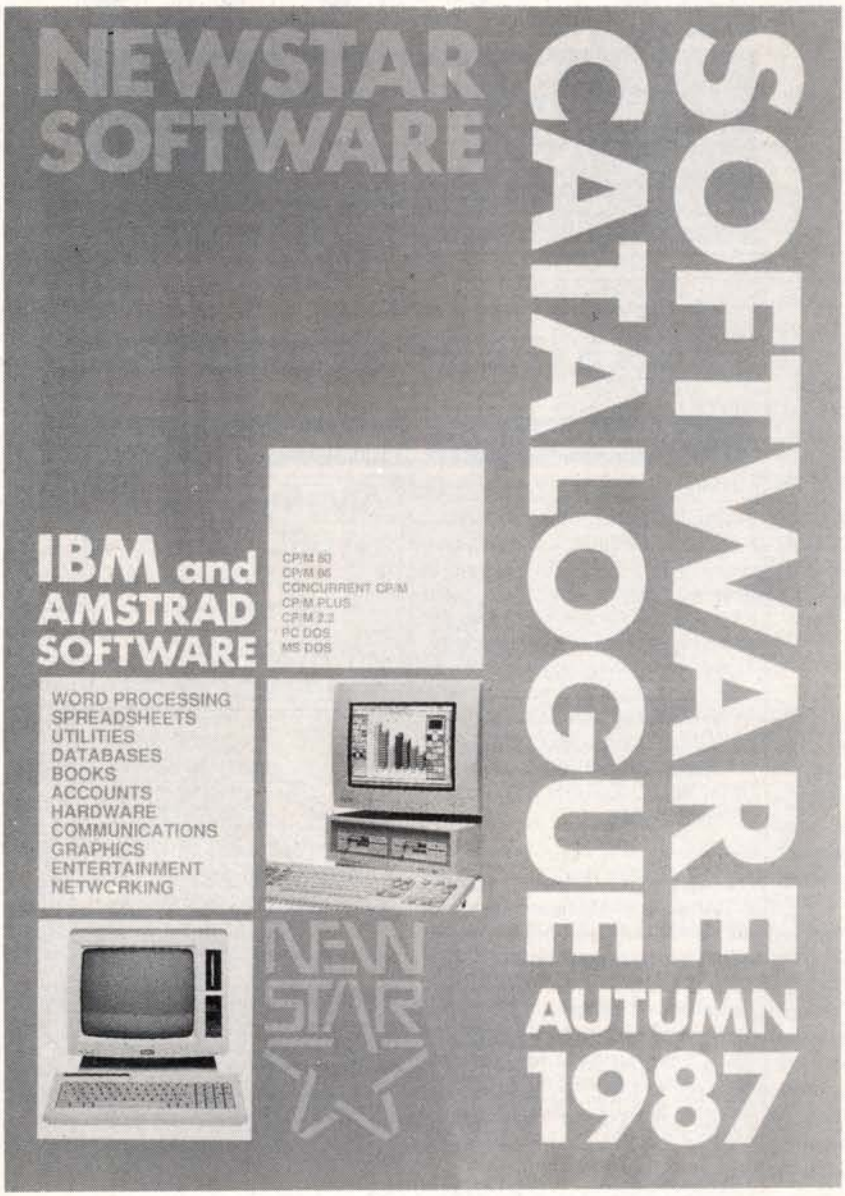

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CHARACTER BUILDING

At last LocoScript can print any character you want. Rob Ainsley investigates.

In the old days of LocoScript 1 everyone said, "If only we had Polish accents LocoScript would be perfect." Now we've got LocoScript 2 with Polish accents the complaints have shifted: "If only we had Chinese...", "If only we had Bengali..." Plainly, despite the massive range of characters LocoScript 2 *can* print, it can never please all of the people all of the time. To this end Locomotive Software have developed a LocoScript utility, distributed with all version of LocoScript 2 from now on, to let you design your own characters no matter how outlandish your particular requirements.

The ability to design your own characters is the most exciting part of the latest version of LocoScript 2, version 2.12. On the LocoScript master disc is a file called LOCOCHAR.BAS, which is a BASIC program. Using this program all you do is design the pattern of the character on a grid of dots for high and draft quality print, and for the screen.

The first thing to do is to design your new characters on paper. The screen displays characters on a grid of 8x8 dots, ie. 8 rows by 8 columns; draft quality print is on a 12x9 grid, and high quality on a 24x18 grid. Using a pencil and paper you can draft out your characters on grids until they look about right – you can see the kind of grids that LOCOCHAR works with illustrated on these pages. The grid appears on LOCOCHAR's editing screen much thinner than it actually prints out.

When designing your 8x8 screen character you can put a dot anywhere you like on the grid. However, there are two restrictions on how you can design *printed* characters: you can't use the rightmost column or the bottom two rows of dots on the printed characters, and also you can't put two dots next to each other in the same row. Even with an apparent space between them, two dots in the same row will overlap slightly on the final printout.

Obviously the screen representation of a character, with its limited detail, will only be a rough approximation to your meticulously designed high quality pattern.

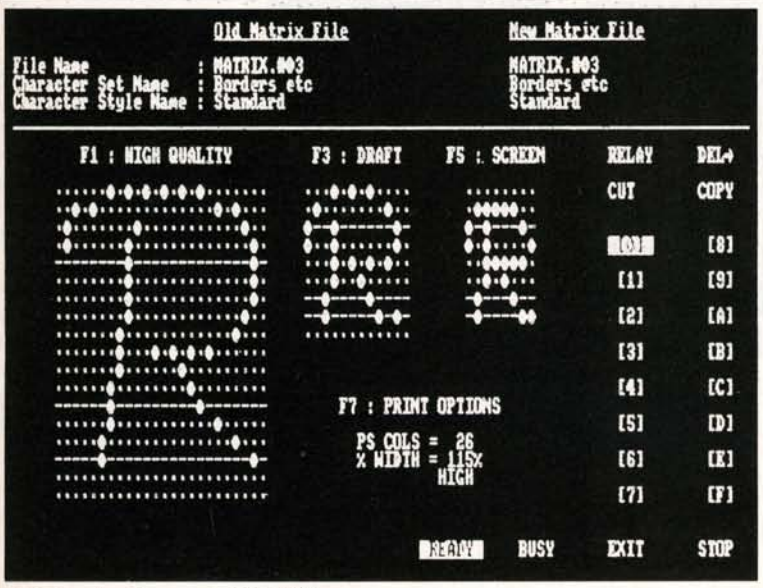
Down to business

Having designed the characters you can start work on modifying LocoScript's character set as you intend. You'll need a disc with LOCOCHAR.BAS, MATRIX.PRI, LOCOCHAR.2 and LOCOCHAR.3, and plenty of space (at least 16k) on it. All these files are on the LocoScript 2.12 master disc, so it's easiest to make up this work disc by formatting a new disc in LocoScript and using the [f8] 'Options' menu to 'Show hidden files' in order to copy MATRIX.PRI and the others onto it.

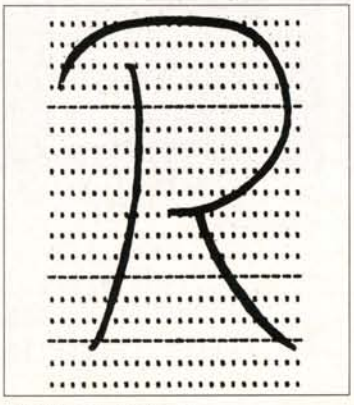
Reset the PCW with [SHIFT]+[EXTRA]+[EXIT], insert the CP/M disc and at the A> prompt type `BASIC`[RETURN]. At the 'Ok' prompt, put your LOCOCHAR work disc in and type `RUN "LOCOCHAR`[RETURN].

The first piece of information you are asked for is the name of the file you're using as a base to alter, which will be MATRIX.PRI the first time. You are then asked for the name of the altered character set, which can be anything you like – so long as it's MATRIX followed by a dot, a hash sign (#) and two numbers or letters, eg. MATRIX.#01. Alternatively you can call the altered file MATRIX.PRI, in which case LocoScript will use it to replace the old standard set – convenient because it'll be automatically used whenever Loco starts up. The disadvantage is that you can't recover your previous version of MATRIX.PRI, though of course you can copy the original from your master disc.

After a short delay the design process starts. You'll see 'Non-standard' as the name of the set (MATRIX.PRI is called the 'Standard' character set); this is the name LocoScript will use to identify it when it shows you menus for selecting sets,



▲ The character editing screen in LOCOCHAR



▲ Drafting out your character

What's the use?

You can't use LOCOCHAR to make up a foreign alphabet; you're restricted to 16 characters and you can't mix different sets in a document. At the moment such things are only possible using font designer programs on the PCW using desktop publishers, where of course you don't have LocoScript's useful word processing facilities.

However, within the confines of 16 characters, you have a vast range of possibilities, and the 24x16 grid you have in high quality means quite detailed designs can be printed out. You could design a company logo (designing adjacent characters to join up in half-line spacing to make a larger one), make up the signs of the zodiac, or mimic your own signature.

You could create symbols to put in LocoScripted bar charts – for example, a mineral water company could make bottle symbols and make these into a simple graph to illustrate sales figures – all within a normal LocoScript document.

Borders are an ideal application for LOCOCHAR characters; you just need to design four corners, plus two vertical line and horizontal line units for each set. Invitations, posters and newsletters could use these very effectively.

Such is the definition available, you can design and print out Chinese characters quite effectively too (for restaurant menus, for example) but only having sixteen available per document doesn't give you much scope for expression.

It may yet prove possible to 'hack' the LOCOCHAR.BAS program to modify *more* than 16 of LocoScript's characters... does anyone out there know the secret?

Default set

If you want to use your new character set all the time you may want to make it the 'default' character set. This is done through the [f6] 'Settings' menu at the Disc Manager screen again – choose the 'Printer Defaults' option, then the 'Default Set' option, pick the one you want and save the new SETTINGS.STD to your startup disc.

so you might care to change the name to something more informative – for example, 'Borders' if you're making a set of characters to frame invitations and posters, or 'Hanggul' if you're designing Korean characters.

If you don't want to alter any of the names, just press [RETURN]. You then get a screen showing the three representations – high quality, draft and screen – of one of the LocoScript characters. You can only define up to 16 characters, and these replace the existing LocoScript ones listed on the right hand side of the screen. The characters LOCOCHAR knows as [0] to [9] are normally the characters ⓪ to ⑨, while the letters [A] to [F] are, respectively, the quotation marks (‘) and (’), (“) and (”) , and the single guillemets (‹) and (›).

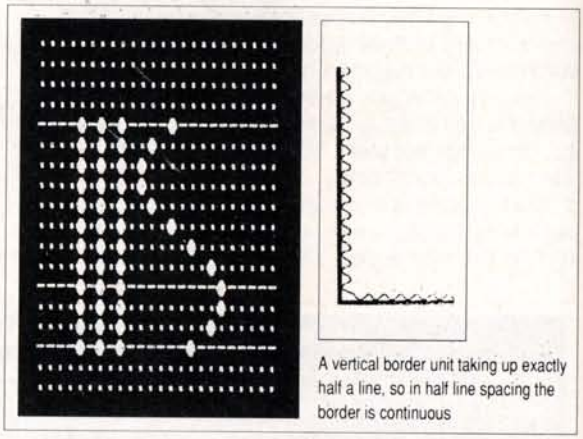
Pressing the appropriate number or letter brings the corresponding character up for editing, and the function keys put you into edit mode for each representation – [f1] for high quality, [f3] for draft, and [f5] for screen. As you go into edit mode, you can adjust the shape already there by laying down blobs or clearing existing blobs (using the space bar) or just delete the whole lot by the [DEL] key and starting from scratch.

The blobs on the grid are laid down by pressing one of the keys [.][/] or [½]. Note that when a dot is laid down it automatically clears anything on the same row either side of it, so you can't put two next to each other horizontally. The [½] key moves the cursor two to the right, and repeated presses will lay down a horizontal line, while the [.] doesn't move the cursor right and is used for vertical lines. [/] moves the cursor one right and is good for laying down diagonal lines.

The three lines of hyphens drawn for you on the grids are useful guides to positioning your character. The top line of hyphens is the top of the 'body' of normal lower case letters, and the middle line is the baseline of the letter – so a letter 'o' would just fit between the two. The bottom line of hyphens is the lowest extent of a 'descender', for example, the tail of a 'g'. The [+] and [-] keys have the useful function of moving the whole lot of blobs one to the right or left.

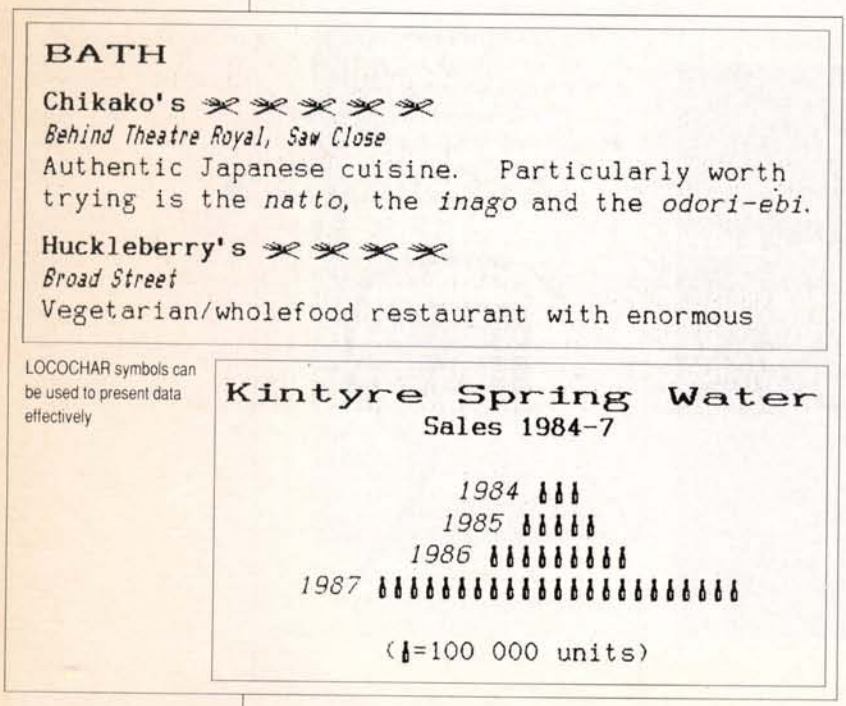
In half-line spacing, a blob on the top line of hyphens on your high quality grid prints out immediately below a blob on the bottom line of hyphens in the line above. So if you are drawing shapes that are supposed to join up vertically, like borders, your character should be designed so it stretches from the top line of hyphens to the bottom. In the document, select half-line spacing, pile the vertical border characters on top of each other, and the resulting printout should be smooth and seamless.

For proportional spacing, LocoScript calculates the width each character should take up for you, basing its figures on the extremities of the pattern. You can manually alter this at the design stage using [f7] to any reasonable percentage you like of the character's width if you want to artificially space out the characters.



A vertical border unit taking up exactly half a line, so in half line spacing the border is continuous

When you've successfully replicated that carefully constructed draft you pencilled out on paper, press [ENTER] and your new character is saved. [EXIT] takes you back to CP/M and saves the new character set to disc, taking a couple of minutes to do so.



LOCOCHAR symbols can be used to present data effectively

Get it in writing

Now copy the MATRIX file you've just created (or modified) to group 0 of your LocoScript startup disc. The best way to do this is to start up LocoScript and use its copy commands; then press [SHIFT]+[EXTRA]+[EXIT] to start again. There must be a file called MATRIX.PRI – even if you don't intend to use the character set it contains – on the startup disc or else the printer won't work. Given that you have to have all your system files on the disc, and the LOCOCHAR 2 and 3 files as well, you'll only have enough space left for one extra character set.

If your modified set is called MATRIX.PRI, you can go

straight into your document and get your special characters just by pressing the appropriate keys – as listed in the box.

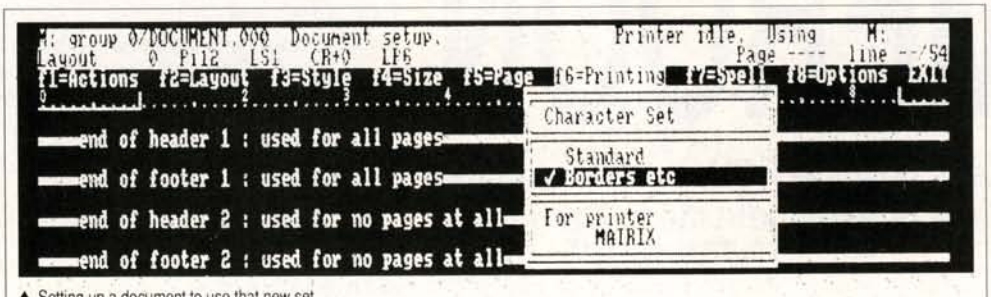
If your modified set was called, say, MATRIX.#01 you have to explicitly tell LocoScript it is there – you only need to do this once, the first time you use the new character set. When the disc management screen appears, press [f6] 'Settings' and move the cursor onto 'Write SETTINGS.STD'. Press [ENTER], then [EXIT] from that menu and accept the offer to 'Write SETTINGS.STD to disc in A'. What this does is store in LocoScript's memory the fact that all your new character sets are available for use later on in a document, or on the printer. On startup next time, they will be recognised as available sets without you having to do anything special.

Note that you can't make any old MATRIX.#?? file into a MATRIX.PRI (so that it is automatically used on start-up)

The sweet sixteen

The redefinable LOCOCHAR characters [0] to [F] are normally the following symbols, obtained in LocoScript by the respective key sequences:

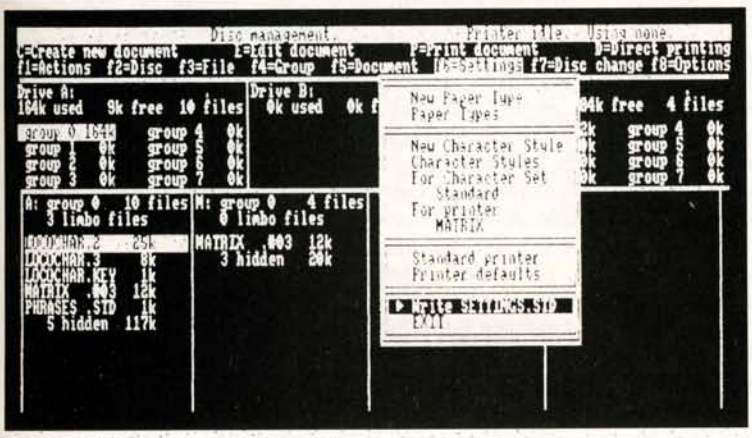
[0] – ⓪ – [EXTRA]+0
[1] – ① – [EXTRA]+1
(etc.)
[9] – ⑨ – [EXTRA]+9
[A] – ' – [ALT]+6
[B] – ' – [ALT]+[SHIFT]+6
[C] – " – [ALT]+2
[D] – " – [ALT]+[SHIFT]+2
[E] – ‹ – [ALT]+[SHIFT]+§
[F] – › – [ALT]+[SHIFT]+#



▲ Setting up a document to use that new set

Getting 2.12

As usual, if you have a version of LocoScript 2 before v2.12 you can upgrade to the latest version (which includes the LOCOCHAR character designer and instructions for its use) by sending your old master disc plus £5 to Locomotive at Allen Court, Dorking, Surrey RH4 1YL.



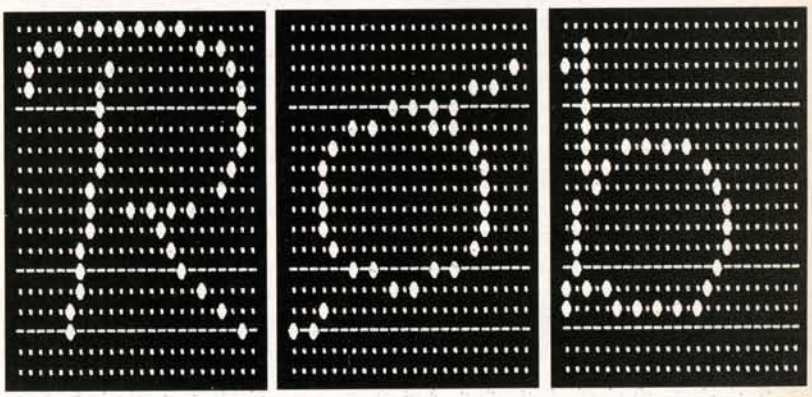
▲ Letting SETTINGS.STD know about your new set

either by renaming it or by using LOCOCHAR on it – you can only make a new MATRIX.PRI from an original standard MATRIX.PRI using LOCOCHAR.

Now you are at last ready to actually use the new characters, so create or edit the document you want. To make Loco use a certain set in that document, while editing hit [f1] for 'Actions' and pick 'Document setup', on the [f6] for 'Printing' menu select 'Character set' (which will probably be on 'Standard') and with the cursor over the set you require press [+]. When you go back to the document itself, your new characters are available just like any others.

Whenever you create a document, the character set used in the group's TEMPLATE.STD is used, so if you have a set you want to use regularly make sure you edit the TEMPLATE.STD and change the character set as just described. When you print you'll be asked if you want to 'change to character set intended for document', because the printer may expect the standard MATRIX.PRI set.

You can use any of LocoScript's well-loved effects without further effort. Italics and bold are worked out by LocoScript from the high quality or draft quality patterns you devised, the first by slanting (strictly 'shearing') the normal pattern, the second by effectively doubling the width of each blob. Double pitch is obtained by stretching out the pattern, and subscripts and superscripts by squashing the draft pattern up. Even in NLQ, LocoScript uses the draft patterns you designed for 15 and 17 pitch, and their double width, italic and bold variants - so, if you want your characters to available in the full range of sizes, you'll have to produce 'draft' versions even if the output will be high quality.



Save the slog of writing your signature – make it up in chunks in Locochar, and store the whole thing as a phrase in LocoScript

Yours
Rob

CANDID CAMEROON

Tony Hicking tells how the PCW is changing the face of expatriate life in Cameroon

Case in Point invites contributions "if you use your PCW for something more than just running LocoScript". Just running LocoScript! I can't imagine how I ever did my job, looked after my personal affairs, or lived overseas without it (plus a little help from C/PM).

I bought my Amstrad after reading about word processing and the PCW 8256 in a magazine which has nothing to do with computers. Up to then I had been hesitating over the sheer complication of choice, specifications, components, compatibility and jargon in the specialised media. (8000 Plus didn't exist then, I hasten to add). This article convinced me that here was a cure for writer's block (and, as I discovered later, cramp) and I ordered one to be air-freighted to Cameroon.

"Why on earth do you need a computer?" Sheila asked.

"To keep up with the grandchildren – and anyway there's no VAT on personal exports". Inspired, that, I thought.

It cut no ice. For once the mention of grandchildren failed to melt the frost. "An excuse to bring more work home, you mean". She was in the fast lane all right that day.

I get a stream of people wanting decisions, floating new ideas, reporting disasters, giving weather and crop forecasts. Estate managers from far afield cannot be told to come back another time. Government officials demand statistics. Our financiers come to see how we are spending their money. Reps are constantly wanting to sell us chemicals, fertilisers, spare parts, services, and advertising space.

Above all, trees don't stop growing and crops don't stop needing to be harvested, tapped, plucked or winnowed just because it's the weekend. Homework is thus the order of the day – or rather the night – and it is all down to my Amstrad that I can now keep up with the work-load and get a decent night's sleep.

The link between all this and my PCW is provided by a microrecorder, as essential a tool for me as a knife is to a rubber tapper. In the evening I transpose into a notebook and index the contents before transferring to disc within such groups as STRATEGY, FINANCE, PERSONEL, MARKTING, COMITEES, etc. (shut up LocoSpell).

Confidential stuff – strategy, policy, political and economic analysis, performance appraisals – is kept on disc away from prying eyes.

Personal services

An expatriate also needs to be well organised on the personal front. Back home in the UK are family and friends, bank managers (offshore!), investment advisers, insurance brokers, district councils, property managers – and the tax man – to be kept in touch with, as well as building societies, credit card and mail order companies, book clubs, magazine subscriptions, birthdays and anniversaries. It is important to ensure nothing gets forgotten. The modern equivalent of talking drums, the cleft stick or the mail-boat, is the regular courier service, the arrival of which brings bumf needing attention – like inviting your cheques. How is it that bills never go astray, only airline baggage?

The beginning of the partnership with my Amstrad coincided with the launch of 8000 Plus. Of all the listings published during the past twelve months, two have repaid the effort and eye strain. The one with the greatest practical value for me, and I'm sure for many others, is the word counter WRDCOUNT, the continued absence of which from LocoScript is an aberration. I beg you, Locomotive, put us out of our misery and tell us you are working on it!

That apart, in my view the LocoScript 1 manual was more sinned against than sinning. It took you through a detailed, step by step understanding before revealing the short-cuts. The sinking-in of the detail was admittedly time-consuming and traumatic, but if even I could tame the jungle of headers and footers, page numbering, blocks and phrases then it can't have been that bad. Maybe being used to pioneering virgin forest gave me an edge, although I have still to master the art of tearing a strip off continuous stationery.

Only once have I been caught out through not saving at regular intervals. I pressed the wrong key and gave myself an extra four hours work. But it's not always your fault; in the tropics it can be a race against time, especially during the rainy season. The electricity supply has a habit of cutting and running before a storm, so at the first hint of thunder, or when the lightning starts to flicker, you FINISH EDIT and go and do something else, like making sure your buckets are placed beneath the holes in the roof, and then pulling the sheets over your head and blocking your ears.

CP/M safari

The first use I wanted to make of CP/M was to computerise my personal accounts. I have always kept them in detail, budgeting income and expenditure, and forecasting cash flow. The prospect of being able to dispense with ledgers

Out of this world

I am on secondment to a plantation corporation in Cameroon comprising 100,000 acres of rubber, oil palms, tea, bananas, coconuts and pepper. There are 16,000 employees, all provided with housing, clinics and village aid posts. We have twenty-two estates, two palm oil mills, eight rubber and three tea factories, a thousand vehicles, plus heavy plant for land-clearance and road-making.

We do our own metal fabrication, heavy and light engineering, civil and electrical works and water supply, and generate our own electricity. We operate a printing press, a sawmill, a motor transport garage, a telephone exchange , a radio network, railways, schools, community centres, and a golf club. And apart from mine there's not another micro anywhere.

and files, the chore of postings and the monthly writing-up, attracted me. Until I saw Money Manager from Connect Systems only commercial accounting seemed to exist for the software houses. (Doesn't everybody manage their money?) My accounts are now all on it and kept up to date – tax man please note. No longer is it a chore, and to tell the truth I look forward to paying bills to give me an excuse to start it up.

SuperCalc 2 handles commodity-price tables, calculates export proceeds, and assists in preparing estimates. Another program keeps my investments up to date, or as up to date as possible since the Financial Times takes two weeks to get here, even by airmail; it's too expensive by courier.

Public libraries are few and far between so we borrow and lend among ourselves – books, records, videotapes – all things which people accumulate in overseas communities. Even where there is an Alliance Française, Goethe Institute or British Council we all become amateur librarians and archivists. Lists are circulated and get dog-eared. They need to be updated when people return from leave with the latest novel or video. DataGem (DataStore's earlier incarnation) now handles all this for me as well as our personal address book and the Corporation's internal phone directories.

Write Hand Man – the all-purpose electronic notepad, diary, calculator etc. – is the one program I have abandoned. Apart from its incomprehensibility I cannot see the point of it for home use. Surely, even in the UK, nobody stays at home in front of the computer all day long. Or am I out of touch?

As for leisure, the golf club plays a big part although with the handicapping system already computerised, you can't escape the statistical. Further scope exists, however, for membership lists, subscriptions and bar accounts – God help us! Colossus 4 Bridge, Cyrus II Chess, and Tomahawk provide the in-house relaxation. In nine months of using Tomahawk I have never succeeded in making a proper landing. Even so it has given me a better appreciation of our aerial crop-spraying budgets. If my problems are anything to go by, no wonder pilots come expensive.

Bridge is widely popular in expatriate communities, though it is not always easy to get a four together. Now that we've got the PCW to make up numbers, keeping our hand in is no longer a problem.

With the Chess program I have set myself the objective of beating the computer three times at each level, including playing black at least once, before going on to the next. I do wish, though, that my opponent wouldn't beep so gleefully every time it makes a move. Chess is my way of warming up for the five-year strategy review.

The biorhythm method

In the developing countries there can be no real progress without the first priority being that of its nationals. The prerequisites are high standards set for the initial selection and recruitment of management, a structured training policy, and continuous performance-appraisal against work programmes. By these means people are stretched and enabled to demonstrate their potential. This, in turn, opens up career paths and thus identifies further training and development needs.

In this context my Amstrad and I have discovered what we think could be a new tool in the second of the listings I mentioned earlier – the biorhythms calculator.

I am using it to help analyse the performance of selected managers by relating peaks and troughs to their individual cycles. Already there is a pattern, but six months is too short a time-scale on which to base any conclusions. Also, whether or not this is a realistic approach depends on whether biorhythms have any validity anyway.

I am also testing it on myself to see when I can expect to be at a particular peak. For example would it be better if, rather than dealing with major issues (intellectual), I were to be paying more attention to my wife (emotional), or hacking round the golf course (physical)? These three elements have never yet reached 100% at one and the same time cycle. I wonder if it is really possible to be a sports star, a great lover, and a genius all at once?

We went on leave for a couple of months recently. As soon as we boarded the plane in Douala I knew there was something missing. Forty eight hours after landing at Gatwick the Tandy organisation was better off by £399 (+VAT, damn it!)

Can I have a portable next time, please Mr Sugar? EXIT

Critical matter

Everyone knows the good old biorhythm theory – you've got Intellectual, Emotional and Physical cycles ticking away, going from –100 to +100, each with a different period. The worst times are not when you hit -100, but on the 'critical day' at zero, when the cycle switches between positive and negative values.

Are you a case?

Has your PCW revolutionised your life? Traumatised it? 'Case in Point' is a regular feature of 8000 Plus and we are looking for readers with interesting experiences to relate. If you use your PCW for something more than just LocoScript, why not share your thoughts with a waiting world?

Try to keep things light but specific with a smattering of hard facts about the packages you use. If you've had a bad time with some software don't be afraid to sound off – you could be saving other reader weeks of agony.

We are looking for articles of not more than 2000 words, for which we will pay our usual generous rates. Write to *Case in Point, 8000 Plus, 4 Queen Street, Bath BA1 1EJ.*

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COMPETITION !!!

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Mini Office Professional could be the answer to all your PCW software needs – ten copies are up for grabs in our testing competition.

Is it a database? Is it a spreadsheet? Is it a graph drawer? Is it a word processor? Is it a communications program? No, it's all of these rolled into one integrated package. Database Software's *Mini Office Professional* has caused a stir by offering for £29.95 a set of programs that independently would probably cost you over £200. And they aren't just toys either; each of the component programs in Mini Office has all the features that the average user would need.

Because they are 'integrated', each application works by a similar series of menus and keystrokes, so you don't need to learn five totally different ways of working five programs. In our review last month, we rated Mini Office as 5 out of 5 on 'Range of Features', 'Ease of Use', 'Performance' and 'Value Verdict' – and we wouldn't lie to you, would we?

But just in case £29.95 is still too much for you, 8000 Plus and Database Software are offering ten readers the chance to win a copy of Mini Office Professional free, gratis and for nothing.

All you have to do is...

One of the features of Mini Office is a way to transfer details from the database directly into the word processor. Using this facility you can make up simple mailshots, adding names and addresses into the right places of a letter.

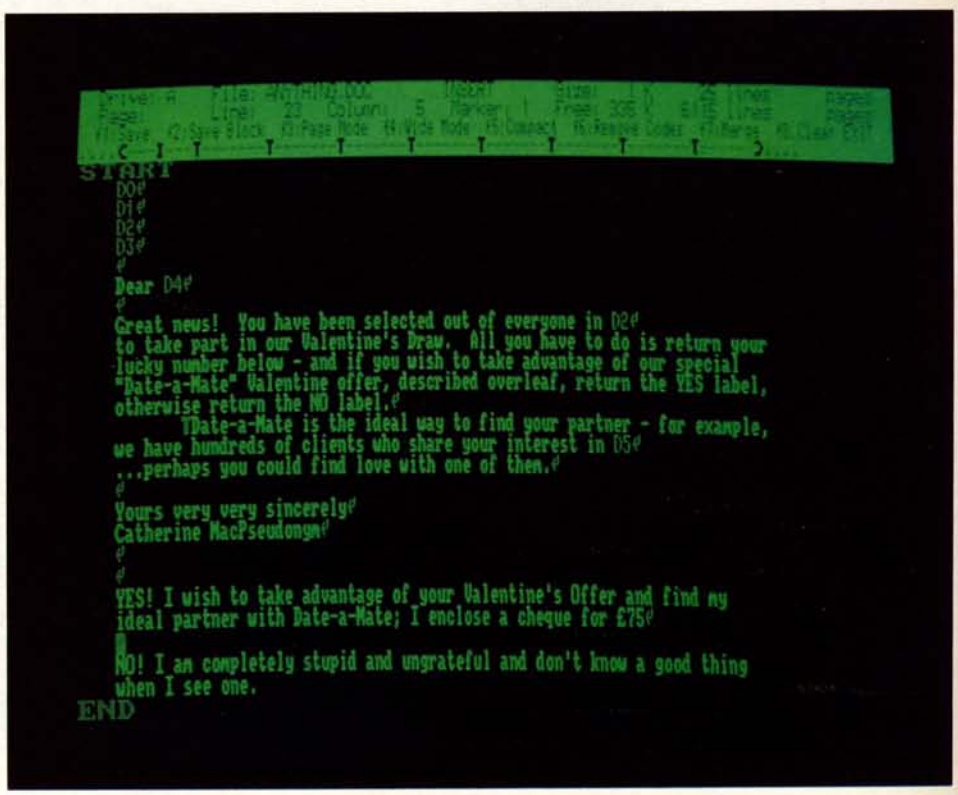
8000 Plus's little known subsidiary company, the computer dating agency Date-a-Mate, is gearing up for the Valentine's Day rush. Catherine MacPseudonym, the manageress of Date-a-Mate, has a bit of a problem. She has set up a letter in Mini Office's word processor, and she's got her list of clients on Mini Office's database, but she's not sure that the letter skeleton is right for the data.

You've got to tell her what items from the client's personal details should appear in which slots in the final letter. The screen photo shows how the letter looks in Mini Office's word processor. The dimmer words, like D3, are Mini Office's way of saying "print item number 3 from the database here in the letter". Printed below it are all the details that Date-a-Mate holds about one of their clients, labelled A to J.

For example, because D4 is the D-number after the 'Dear' and 'Merchant Banking' is item J, if you think the letter ought to begin 'Dear Merchant Banking' you would write down 'D4 – J' on your entry. Once you've worked out which items ought to go in slots D0 to D5, write the six pairs of answers down on a postcard or the back of an envelope. There are more items in the database than are needed in the letter, so not all will be used.

Post your solutions off to *Mini Office Competition, 8000 Plus, 4 Queen Street, Bath BA1 1EJ.* The first ten correct entries drawn on *Friday February 26th* will win a copy of Mini Office Professional; the results will be announced in the April issue of 8000 Plus.

The standard rules apply – no multiple entries, the editor's decision is final, no correspondence etc.



```
START
  D0
  D1
  D2
  D3

  Dear D4

  Great news!  You have been selected out of everyone in D2
  to take part in our Valentine's Draw.  All you have to do is return your
  lucky number below - and if you wish to take advantage of our special
  "Date-a-Mate" Valentine offer, described overleaf, return the YES label,
  otherwise return the NO label.
        TDate-a-Mate is the ideal way to find your partner - for example,
  we have hundreds of clients who share your interest in D5
  ...perhaps you could find love with one of them.

  Yours very very sincerely
  Catherine MacPseudonym

  YES! I wish to take advantage of your Valentine's Offer and find my
  ideal partner with Date-a-Mate; I enclose a cheque for £75

  NO! I am completely stupid and ungrateful and don't know a good thing
  when I see one.
END
```

A: Smith	E: 4 Marie Stopes Way	I: Yes
B: Jane	F: Bath	J: Merchant Banking
C: Miss J.A. Smith	G: Avon	
D: 02/11/52	H: Blue	

TYPE IT AGAIN, SAM

Alec Rae discovers how SETKEYS can give you power over your keyboard

Have you ever tried to work out how much of your life is spent typing the same words or phrases over and over again on your PCW? You would need a computer to work it out. But with a little bit of know-how you can get CP/M to take most of the hard work out of repeating yourself with its clever SETKEYS utility.

This works a bit like the [PASTE] key works in LocoScript. Suppose you are using a program in CP/M – let's say BASIC for argument's sake. When typing in a listing you might find that you were regularly typing and retyping the word 'GOTO'. Or maybe in SuperCalc when printing a file out you keep typing the sequence of keys '/GB/ODALL,P'. You can arrange so that a simple key press will do all this typing for you, maybe [f1] or, as a mnemonic for 'print', [EXTRA]+P.

The first task is to decide on which key to use for the abbreviation. You obviously don't want to choose a simple letter key like 'e' to represent a phrase, for example `ERA *.BAK`, or every time you typed 'e' in a word you would find half your files being deleted.

However there are a number of keys on the keyboard normally unused by CP/M which you can conveniently adapt to your own needs – for instance the function keys [f1] to [f8] and all the vague keys like [UNIT] or [LINE] that are usually only used for LocoScript.

Token of affection

Most people want to make one key press produce a word or phrase, in which case you need to get to grips with what the manual gaily calls 'expansion tokens'.

In SETKEYS, you don't directly say "key [f1] is to produce the word 'GOTO' from now on". What you have to do is say "key [f1] will produce phrase number #80 from now on, and phrase number #80 will be the word "GOTO"'. The number associated with a phrase, #80 in this example, is the 'expansion token', and you can have up to 31 expansion tokens numbered from #80 to #9E inclusive (the '#' means it is a hexadecimal number – see the box if you are confused). It follows that you can't define more than 31 different phrases in SETKEYS.

While all 31 tokens are in theory free for use, most of them are already attributed to various keys. It is therefore worthwhile checking that you are not going to accidentally redefine a key that is vital in any program you commonly use. For instance, it is a good idea to steer clear of tokens #80, #89, #8A, #93 and #94, since these respectively define the [STOP] key, the forward and backward [DEL] keys and the cursor left and right keys. Change those and you won't be able to edit command lines in CP/M or BASIC.

The simplest thing is to always use expansion tokens #9B, #9C, #9D and #9E first of all, as these are unused and won't mess up any of the existing keys. A complete list of which expansion tokens are tied to which keys is given on page 112 of the 8000-series CP/M manual, or page 538 of the 9512 manual. For example, looking at that you can see that as long as you don't need the [CUT] key for anything else, you can re-use expansion token #8C safely.

Putting it on file

All that remains is to put the right commands into a file. This must be an ASCII file so if you don't have a CP/M editor like NewWord or Protext you will either have to get to grips with BASIC's RPED editor (not a too impossible task) or just write the file in LocoScript and then use the 'Make ASCII file (simple text)' command. If you use LocoScript remember that the resulting ASCII file has to be put into group 0 (nearest the left).

For every key to be redefined, you need two lines. One to set up the phrase the expansion token is to produce, and one to tie the key you have chosen to that expansion token. Suppose you want to make the key [f1] produce the CP/M command `DIR A:` (a bit like the 'Disc Change' command in LocoScript 1).

First you pick the expansion token you want to use – let's pick #9B, the first genuinely free one. Now every key on the keyboard has a code number given on a diagram in the manual which is also reproduced here: the key marked [f1/f2] is key number 02, you can see. Type the following two lines into a file called CHANGED.KYS (you can of course use any file name you like – CHANGED.KYS is just an example):

```
E #9B "DIR A:"
02 N "↑'#9B'"
```

The first line says 'Expansion token number #9B is the phrase DIR A:' – the line takes the form E (for 'Expansion token'), then the token number, then the phrase in double quotes. The second line says that key number 02 in its Normal state (ie. no [SHIFT]ing, [ALT]ing or anything)

SuperCalc note

SuperCalc users should recognise the obscure collection of commands used here: `/GB/ODALL,P` is the sequence of keys you press to print a file out, meaning "Globally turn Borders off, Output in Display form ALL the data to the Printer".

Getting back again

There are a couple of practical reasons why you shouldn't go mad and try to assign every possible key combination to one of your favourite words however – (1) there is a limited size to SETKEYS's memory (around 750 characters) and and if you go beyond the number of characters this can take it will just ignore new settings. (2) you won't be able to remember what and where all the combinations are.

Once you have discovered the joys of SETKEYS you can get going. You could have a suitable SETKEYS file with all the keys set up for short commands in every program you use – BASIC, a spreadsheet, a database and so on.

The problem is of course that once you have redefined your keyboard it can be difficult to get it back to normal without switching off and starting again. 9512 owners are all right since they have a new utility called CPMKEYS.COM which clears everything and allows you to start again if you want – just type `CPMKEYS` [RETURN] at the A> prompt.

Although this file isn't supplied with the 8000 series machines, it does work fine with them – find a friend with a 9512 and copy it. The only other option for 8256/8512 owners is to look at page 112 of your CP/M manual and write a special SETKEYS file to revert all the keys to the default settings listed there.

produces expansion token number #9B. What this all means is that once it is set up every time you press [f1] the phrase 'DIR A:' will appear on the screen.

To actually tell CP/M to obey these key changes defined in the file CHANGED.KYS, get SETKEYS.COM from your CP/M master disc onto the same disc as CHANGED.KYS, using PIP to copy it if necessary. Then at the CP/M A> prompt type `SETKEYS CHANGED.KYS`. The disc will whirr for a moment and when the A> prompt returns your key-board is miraculously changed. Instead of producing boring things like ↑Q your [f1] key will print out DIR A:.

There is one snag. After printing DIR A: it doesn't actually do it – you have to press [RETURN] to make it work. Fortunately you can even save yourself the trouble of pressing [RETURN] at the end by writing `E #9B "DIR A:↑M"` in CHANGED.KYS instead (the up-arrow is [EXTRA]+;). ↑M is a special code for [RETURN].

BASIC users might like to produce `LOAD "` as a standard phrase that could save them hours of typing. The problem is that as soon as you type a ", SETKEYS takes this as being the end of the phrase, so it is difficult to embed this in a phrase. You have to type `"LOAD ↑""` in the expansion token definition to do this – the ↑ tells SETKEYS just to read the following " literally and not to treat it as a command.

It is not just text that you can produce with this method. For instance you can produce escape codes just as easily. Use `E #9B ↑[E↑[H` – the Escape Codes to clear the screen and return the cursor to the top of the screen – in your CHANGED.KYS file and every time you press [f1] the screen clears. For the technical, `↑[` produces ASCII code 27, or 'Escape', so this expansion token has been set up to produce Escape-E Escape-H, ie. the PCW's 'Clear Screen' code.

Just a letter

There are obviously other uses. If, for instance you use é regularly (normally rather cumbersome to achieve) you might want to attribute this to a special key.

There are two differences here. First, because you can't type é normally you have to find its ASCII code, which happens to be 225. You can find all the relevant codes on pages 113-118 of the 8000 series CP/M manual, or pages 547-554 of the 9512 manual. Secondly, because you only want to produce a single character, the é, you don't need to use an expansion token.

This is one case where using an f-key would not be suitable, and you would probably be far happier to get é by pressing [ALT]+E. Now, looking on the keyboard chart the E key is number 58, so add a line to your CHANGED.KYS file which says:

```
58 A "↑'225'"
```

Here 58 is the number of the E key, the A that follows stands for [ALT] so that it will only work while the [ALT] key is pressed – ie. pressing E alone will still produce 'e', but [ALT]+E will give 'é'. Finally, the bit in quotes tells SETKEYS to generate ASCII code 225 for [ALT]+E. And that's all you need – no expansion token in this case because it is only a single character.

As has been explained, the 'A' in the above commands makes the SETKEYS definition only work when [ALT] is held down. You could use the letters N, A, E, S or SA at that point in the command if you wanted the definition to work with Normal use (no [SHIFT]ing etc), with [ALT], with [EXTRA], with [SHIFT] or with [SHIFT] *and* [ALT]. You can combine these, so `58 A E "↑'225'"` would make the E key produce é if *either* [ALT] *or* [EXTRA] were held down.

Things are even simpler if you *can* type the character in question directly at the keyboard – you don't need to look up the ASCII codes at all. For instance, suppose you want to redefine your QWERTY keyboard to the continental AZERTY standard, you might start by redefining the Q key to produce A. So your file to be given to SETKEYS would start

```
67 N "a"
67 S "A"
```

Which means, whenever key no. 67 (the Q) is pressed normally, generate an 'a'. Whenever [SHIFT] and key 67 is pressed, generate a capital 'A'. All you have got to do now is paint over your keytops!

EXIT

A hex on you

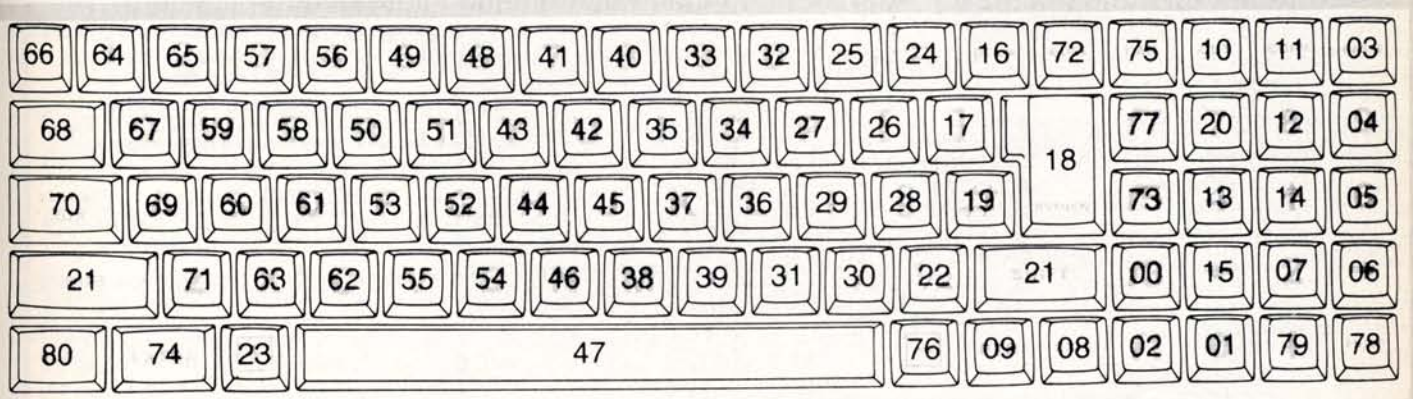
An alarming number of computer operations, the expansion token numbering in SETKEYS being one such, expect things to be typed in in 'hexadecimal' or 'hex' for short. To all students of modern maths, this is 'counting in base 16'.

In Hex, the letters A to F are used as the digits 10 to 15 respectively. So to count in hex you go 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, A, B, C, D, E, F, 10, 11, 12... 18, 19, 1A, 1B, 1C, 1D, 1E, 1F, 20, 21... 9E, 9F, A0, A1... FF. Hexadecimal FF (written #FF) corresponds to 255 in ordinary decimal numbering.

You don't need to understand this to use SETKEYS, but it's interesting (isn't it?). In practical terms, when SETKEYS expects the number of an expansion token between #80 and #9E you can use any of #80, #81, #82... to #89 and then #8A, #8B, #8C, #8D, #8E and #8F, then #90 to #99 and #9A to #9E – a total choice of 31.

For example

There are two SETKEYS files provided on the CP/M discs which you might want to look at as examples of how things are done. Anyone using programs that use WordStar commands will be interested in KEYS.WP (run it by `SETKEYS KEYS.WP`). Logo fans will want to run KEYS.DRL to make the Logo editor work.



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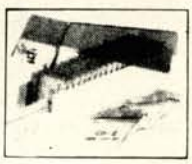

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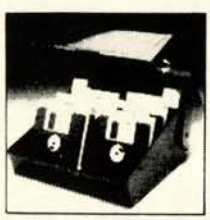

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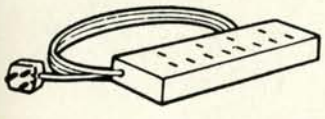

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A desktop organiser is a program combining the functions of a notepad, a calculator, an address and phone book, and a clock; the 'memory resident' description that Jeeves affords itself means the program sits in the PCW's M drive while you run other programs. So, if you're in the middle of working through your SuperCalc spreadsheet and you have a brainwave, you can call up the notepad at the click of a button, record the details, and click back to your spreadsheet. The only bit of paper you ever need for Jeeves is the credit card slip when you buy it.

A WIMP environment is another of those wacky acronyms so beloved of computer folk. It stands for "Windows, Icons, Menus and Pointers", it goes with a mouse – a box with a trackerball underneath which you roll around a desk top to control a pointer's position on the screen. When you call up Jeeves, a window appears in the lower half of the screen with all the programs on the disc represented by icons – little stylised mnemonic pictures.

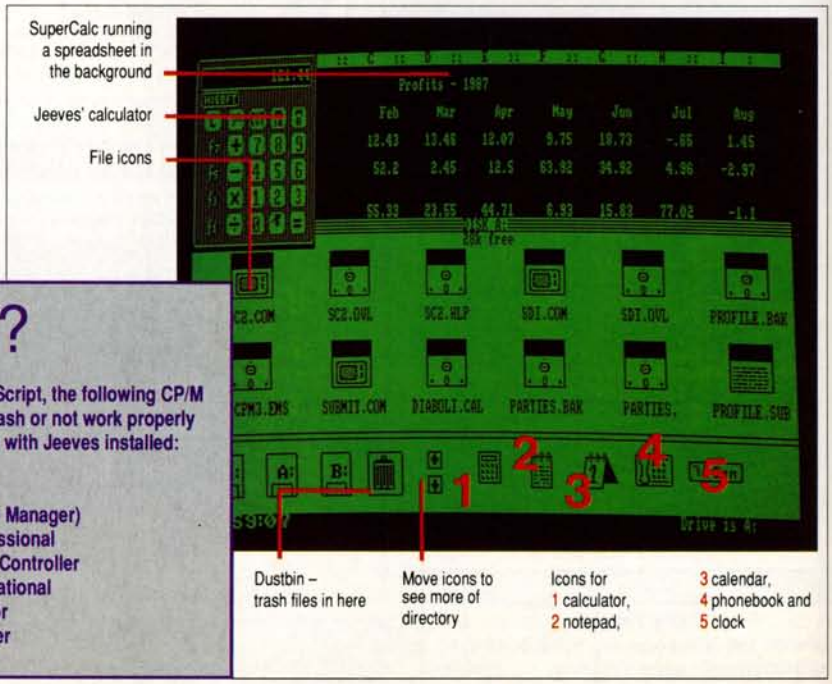
In Jeeves, you use your mouse to move the pointer around the window and 'pick up' one of the file icons by clicking a button on the mouse. You can then copy the file, for example, by dragging it on top of the icon for another disc drive, or erase it by dragging it into a bin icon. It's a lot more intuitive than typing in commands like `A>PIP A:=B:J14CPM3.EMS`. Clicking on the icons for the calculator, phone book, calendar and so on brings up another window in the top left hand corner with the function selected, clicking both buttons on the mouse takes you back to the main window. All this time the clock runs constantly on the bottom line of the screen.

Don't believe everything you read

The first problem with Jeeves is making up your self-start disc; despite the fact that you've probably bought it to avoid CP/M as much as anything else, you still have to type the CP/M commands `CLOCK`, `JEEVES M:ON` and `JEEVES.S` every time you run the program. (You can create a PROFILE.SUB file to do this for you, if you know how).

These commands set the system clock up then copy Jeeves' work files to the M drive – they take up about 60k of space there, more if you have lots of notes. If you now press both mouse buttons at the same time you can call up Jeeves, getting a list of the files on the A drive disc represented by those icons. You change to another drive (thus replacing CP/M's `DIR`) by clicking on the appropriate drive icon.

At the bottom of the screen are the icons representing the utilities – calculator, notepad, calendar, phone book and clock. On the first, a picture of a calculator appears at the



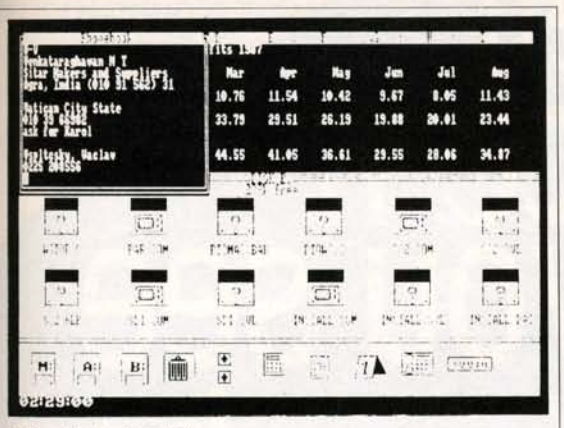
But will it work?

You can call Jeeves from inside some programs and not others – this is due to the way it uses the PCW's memory which can interfere with the working of some programs. Obviously a comprehensive list is impossible, but some of the more popular packages Jeeves appears to work with are:

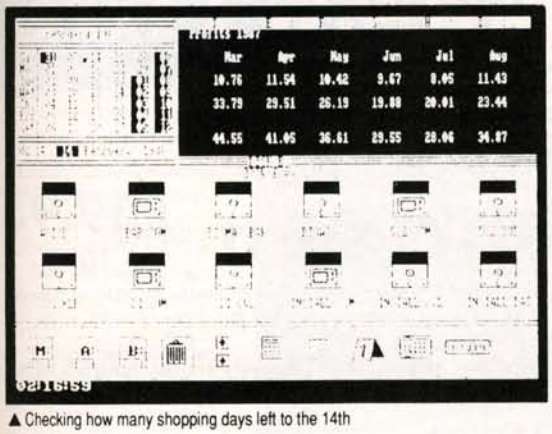
- Mallard BASIC, DR Logo, SuperCalc2
- DataStore, Cardbox, dBase II
- WordStar, Cracker
- Sage Accounts

Apart from LocoScript, the following CP/M programs will just crash or not work properly if you try to run them with Jeeves installed:

- Protext
- Masterfile 8000
- AtLast (Database Manager)
- Mini Office Professional
- Digita Business Controller
- Newsdesk International
- Fleet Street Editor
- Desktop Publisher



▲ Consulting the phone book



▲ Checking how many shopping days left to the 14th

top left of the screen and clicking on the buttons simulates a key press. The notepad shows up as a window in the top left corner and has an unlimited number of pages on which you can record messages and ideas. The contents of a notebook, NOTEBOOK.DAT, can be used in LocoScript by using the 'Insert Text' facility to put it into another document. The phone book is similar but each page is headed with two letters of the alphabet with three pages for each pair of letters.

The calendar is possibly the most useful function and will show any month for any year between 1978 and 2000. You click on the displayed month or year to change it (one button takes you forward, the other back). There's also a clock on the calendar display showing you today's date too (though you have to set that yourself the first time you use the calendar function each day).

Two things at once

To run any program, you click twice on the appropriate .COM file – for example, to run BASIC you double-click on BASIC.COM. You are always returned to the A> prompt to be asked if you need to type any more on the command line (eg. RPED if you want to run the RPED editor). Pressing [RETURN] starts the program up. This can get irritating after a while if your programs don't need extra command line items.

BASIC, or whatever, then starts as normal, but you can call up Jeeves any time you want. The clock runs continuously on the very bottom line of the screen, unless you turn it off explicitly in Jeeves. You can't run one program while you're inside another, but you can copy or delete files in the middle of running a program, which could be very useful if you want to make space on a disc for the 25k program you're working on.

Programmers' pleasure

The desktop organiser program itself is very pretty, but not the be all and end all of the Kempston system. The mouse will work with most of the popular desktop publishing programs (but not Newsdesk International), so is handy if you need one.

For programmers, Mallard BASIC and DR Logo (and other languages, of course) can read the mouse. The mouse generates an x- and a y- co-ordinate telling you where it is pointing to, and also a variable telling you which of the two buttons are up or down. For example, if you had the following lines as a subroutine in your program then after each call of it you would find x% and y% held the x- and y-co-ordinates (a number from 0 to 255), leftb% is –1 if the left button only is down, rightb% is –1 if the right button only is down, bothb% is –1 if both buttons are down.

```
500 x%=INP(208):y%=INP(209)
520 button%=INP(212)
530 leftb%=(button%=253)
540 rightb%=(button%=254)
550 bothb%=(button%=252)
560 RETURN
```

The Kempston mouse also comes with a GSX driver so you can use it as an input device to control the cursor position on, for example, DR Graph and DR Draw.

Before you switch off for the night you save all the notes you've made, telephone numbers you've recorded and so on by typing (at the A> prompt, horror!) JEND.S.

The final word

AMS's desktop – *AMX Desktop* at £79.99 (4p more!!) – has been around for some time now, so how do they compare? The AMX desktop has better designed desktop utilities, for example your memos can be laid out better, there are drop-down menus, wider variety of functions and the design of the whole thing is more sophisticated. Jeeves' great plus point is that you can run your CP/M programs, SuperCalc or WordStar say, and still call it up and use all the functions from within the program. You can't with AMX. However, see the box for software that will and won't allow Jeeves to work. Also, the mouse with the AMX Desktop can't be used in your own BASIC programs or GSX applications, so for programmers the Kempston mouse is a better buy.

Opinions vary on desktop organisers like this. Cynics point out that a calculator, calendar, cheap digital watch and notepad will work with any program in the world, require no manual, and will cost you about £5 for the lot.

On the other hand, CP/M haters will welcome the opportunity to avoid that A> prompt. The ability to use Jeeves' facilities from within some programs, like file handling as well as the calendar and clock facilities, is very alluring, and after using a desktop and mouse it seems very unsophisticated and old-fashioned to go back to typing in all your commands at the keyboard.

If you're just after a clock or calendar, or want a gimmick, this is an expensive way to indulge. But if you prefer working in a visual, mouse-operated environment rather than CP/M's written command lines, and the software you use is Jeeves-compatible, or you want to write your own mouse-operated programs, you may well think this is good value. EXIT

Cursors, foiled again

The current version of Jeeves only works with a mouse, and can't be operated from the keyboard alone; however, such a version is planned. Details from Kempston.

PLUSES

- Visual icon-based system is a more intuitive way of working than CP/M
- Continuous time display is handy
- You can use Jeeves from within many business programs
- Mouse can be used with DTPs and your own BASIC programs

MINUSES

- Many programs won't work with Jeeves
- You still need to use CP/M to get it going
- Ordinary calculator, notepad, calendar and digital watch will cost you £5 or so.

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EASE OF USE	■■■■■	DOCUMENTATION	■■■■■

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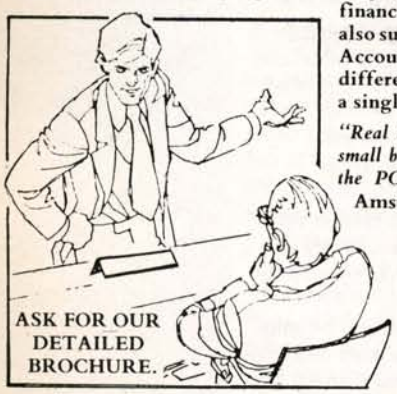

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BOOK LOOK

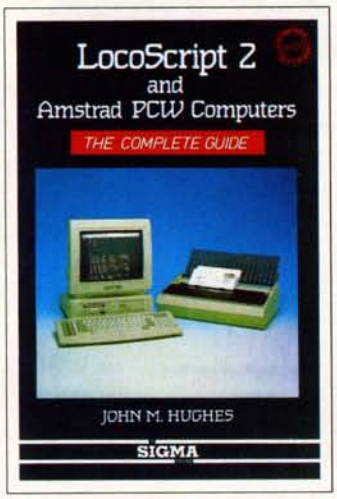
Fed up with the manual? Try one of the month's new LocoScript tutorials.

LOCOSCRIPT 2 & AMSTRAD PCWs by John Hughes

£11.95 ● Sigma Press (Freephone 3477)

Many people are buying the 9512 as a sophisticated typewriter and finding themselves in the computer age. This book takes the 9512 owner from absolute basics of what a computer is through to a thorough explanation of the workings of LocoScript 2, Locomail and Locospell. It also gives a good overview of the world 'beyond LocoScript' – spreadsheets (with a brief description of SuperCalc and similar programs), databases, communications, and so on. It caters for 8000 series LocoScript 2 owners as well, although since it begins from basics much of the information is redundant for anybody already familiar with LocoScript 1.

The whole approach is very much angled towards the office typist turned PCW user and even complete word processing novices should find the whole conversion process made easy by Mr Hughes' gentle step-by-step approach. The text is clear, written in an easy-going style and there are plenty of screen shots to illustrate things. There are some delightfully picturesque explanations of PCW terminology (how about "an unformatted disc is like a new car park – before lines are painted in, the cars cannot be parked in an organised way").



Coping with different daisywheels and dot matrix printers is clearly important for 9512 owners, and the section on 'Printwheels and Printers' covers its ground in detail. The LocoMail chapter is good too – clear examples and a rather more direct approach than the official 9512 manual should enable beginners to get merging straight away. It goes on to quite complex mail merging using conditionals (only printing text if a condition is true) and arithmetic, which aren't fully covered in the manual.

The bottom line with any guide like this must be, how does it compare to the LocoScript 2 manual, or 9512 manual, that everyone has anyway? In scope, style and layout, the two are similar; the differences are more of purpose than anything else. The 9512 manual is more of a comprehensive reference work, while this book is possibly better and more readable as an introduction to the idea of wordprocessing with LocoScript 2. (Compare the manual's 600+ pages to the 200+ of Mr Hughes' book). Which you prefer is a matter of taste more than anything else, and often just reading a different approach to a problem makes the whole thing suddenly fall into place. Certainly those who find 'user instructions' daunting would do well to look at *LocoScript 2 & Amstrad PCWs* – it is a friendly, down-to-earth and very readable guide.

LocoScript 2 & Amstrad PCWs
ISBN 1-85058-0979-9
8000 PLUS VALUE VERDICT ■■■■■

LOCOSCRIPT 2 ON THE PCW 8256/8512 AND 9512 by Ian Sinclair

£9.95 ● Blackwell Scientific (0865 240201)

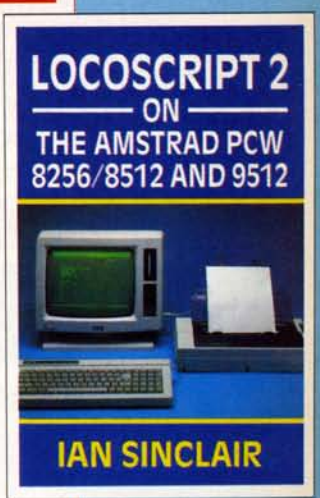
The title of this book is a little misleading – something like 'LocoScript for the PCW 9512' would have been a better guide to show who'll find the book most useful.

Cover blurbs are not renowned for their objectivity; this one claims the book tells you everything you need to know about LocoScript 2 "which is a very different program to use" to LocoScript 1. Strange then that 90% of the book looks like a manual for the old version, particularly the cover, which shows an 8256 running LocoScript 1. It'll be of limited interest to 8000 owners who are reasonably familiar with version 1; most of it covers basics like cutting, pasting, layouts, templates and so on, and the LocoScript 2-specific parts are of insufficient detail to be particularly useful for understanding that program.

It only covers versions up to 2.06, so there's no mention of LOCOCHAR defining your own characters; nor is there anything on LocoMail or LocoSpell, both of which come bundled with the 9512.

The instructions assume no knowledge of word processing, and to ease office typists into word processing starts from 'Direct Printing' mode. As always in Ian Sinclair's books, the tone is light, easy going and readable, though some of the example printouts don't appear to have been checked very thoroughly (mis-spellings, inconsistencies between the 'stored' and 'printed' versions of phrases, and so on).

A big minus is that there are no screen shots. There are also one or two irritating references in passing to things not explained any further – for example, it is mentioned without further elaboration that LocoScript 2 is designed to let you print out a series of short documents as if it were one, with the page numbers following on. On the other hand there are some practical guidelines on setting up letter templates, printing labels and working with different paper sizes. There's a useful 'Help' section at the back with one-paragraph reminders of how to change layouts, numbering pages in headers and footers, and so on (though nothing about how to cope with the dreaded 'disc full' situation).



While this is certainly shorter and simpler than the comprehensive and well-written 9512 manual, it's not necessarily better. This isn't a bad book; it just looks a bit too much like yet another bland PCW potboiler. EXIT

LocoScript 2 on the PCW 8256/8512 and...
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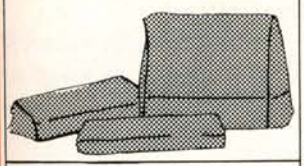

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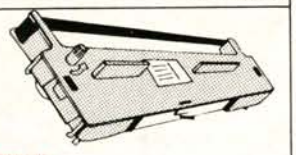

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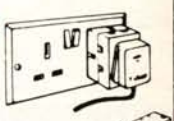

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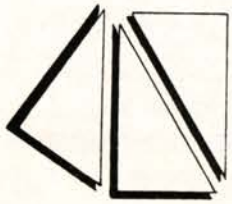

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Access

THE OLD DAYS

Computers weren't invented with the PCW in 1985 – Ben Taylor looks at the history of the technology.

Everywhere you go today, you take the presence of computers for granted. Booking holidays, requesting a book at the library, paying bills, using bank cash dispensers – they're all highly dependent on computerised data retrieval and processing systems, even though rumour has it that it *was* possible to book holidays and borrow books prior to 1978.

The first computers as we would recognise them, electronic storage and calculating machines, were built in the late 1940s, and didn't really make an impact on businesses until the 1960s. Even so, it's apparent that the ideas and inventions that led up to computers began centuries ago.

Child's play

The oldest counting machine known is, of course, the abacus. It was known to be in use in China and the far east thousands of years ago, and it is still used as a ready-reckoner in many oriental shops and stalls.

The most common form of abacus is the Chinese *suan pan* ('reckoning board'). It's an arrangement of poles, every one having seven beads, the two above a crossbar being worth five of the ones below. The rightmost pole is the units column, the next the tens, the next the hundreds, and so on.

Numbers are represented on the abacus by pushing the correct number of beads up to the crossbar. So, 33 would be 3 lower beads on the tens pole and 3 lower beads on the units pole pushed up. To add 6, you slide one more lower bead on the units pole up, and one upper bead (worth five lower ones) down to meet the pole. The number 39 is then read off.

Skilled abacus users can plough through the arithmetic extremely fast, although there is a major problem: abacuses can't multiply or divide very easily. It wasn't until the 17th century that the next step came about. John Napier (1550-1617) was a Scottish mathematician who discovered how to take 'logarithms' (or 'logs' for short) of numbers. This proved the key to division and multiplication (see the box), and led to the invention of the next great calculating device – the slide rule.

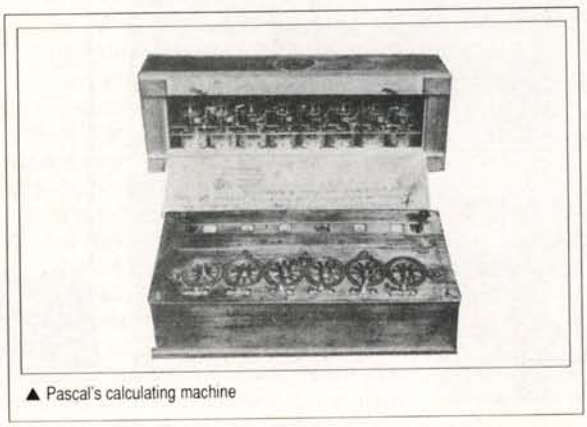
A slide rule consists of a frame with a sliding insert, both marked in logarithmic scales from 1 to 10. To multiply 3 by 2.5, you locate the position of the 3 on the frame, move the slide so that the 1 is over it, and find where 2.5 is on the slide. The number on the frame that 2.5 on the slide is over is the result, 7.5. The distance from 1 to 3 on the frame represents the log of 3, the distance from 1 to 2.5 on the slider is the log of 2.5, so by adding them together you get the log of the product. Slide rules can usually be read to an accuracy of about 0.1%.

Wheels and barrels

The next stage in the story of computers comes as people began to try to build machines to do the hard work for them. One of the earliest known true calculating machines was built in 1642 by Blaise Pascal (after whom the programming language is named).

Pascal (1623-1662) was a French polymath, and to make matters worse he was the son of a tax collector. To help his father with the accounts he built his calculator when he was still 19. The figures were entered into the machine by turning a set of interlocking 10-toothed cogged wheels, and to add a new number in the relevant units/tens/hundreds etc wheels were turned as required. The machine could only add or subtract, so multiplication had to be done by repeated addition. Being very expensive, the machine was not a commercial success.

The next man on the scene was Gottfried von Leibnitz (1646-1716). He was a German philosopher and mathematician, and in 1671 revealed his improved calculating machine. Rather than being based on interlocking wheels as was Pascal's version, Leibnitz used a cylinder with vanes of varying lengths for each digit. Cogged wheels meshed with the cylinder so that when the cylinder turned it moved as many wheels as were in contact with whichever vanes reached them. The wheels carried numbers on them for the result to be read from. The barrel principle formed the basis of all mechanical calculators from then on.



▲ Pascal's calculating machine

Another refinement was made in 1820 by Charles Thomas of Alsace. He perfected Leibnitz's cylinder design by incorporating a stepping system for multiplication. When you wanted to multiply a number by 20, instead of adding it to itself 20 times Thomas's machine allowed you to shift the barrel one place to the right and only do the addition twice. Electrically powered versions of this 'Arithmometer', as it was poetically called, were on sale even in the 1940s.

Finally, in the 1970s the familiar electronic calculator swept away mechanical ones. Clive Sinclair was one of the British pioneers of the technology, and although he didn't invent them his commercial development and marketing

The logarithm method

Every number can be expressed as ten to the power something. 1000 is ten to the power three, written as 10^3, meaning 10 times 10 times 10. Napier thus called 3 the logarithm of 1000.

Now 100 is 10^2, so the log of 100 is 2. When you multiply 1000 by 100 you get a 100,000 or 10^5. Napier observed that 10^2 times 10^3 gives 10^5, and if you add the logs of the numbers being multiplied you get the log of the answer, eg. 2+3=5. Similarly, to divide two numbers you subtract their logarithms: 5-2=3, and $10^5 \div 10^2 = 10^3$.

Taking logarithms of numbers reduces multiplication and division to a process of adding and subtracting, and is the basis for the 'slide rule', feared by many generations of schoolboys until electronic calculators came in.

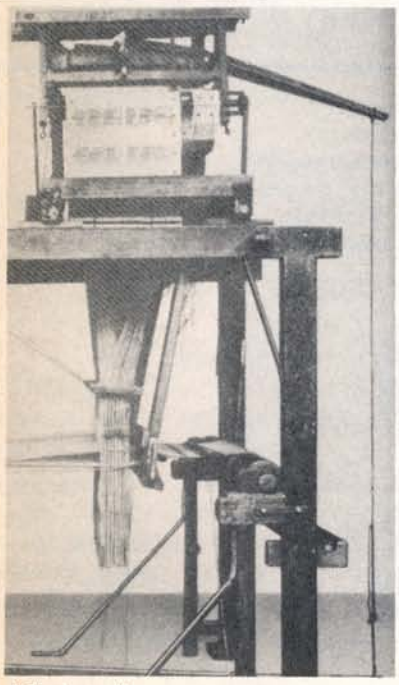
The modern supercomputers which can multiply millions of mind-bogglingly large numbers a second are still struggling to find faster and faster ways to do arithmetic, but essentially all the methods used are variations of the theme of adding or subtracting logarithms.

Blessed Ada
Babbage employed an assistant to work on his Analytical Engine – Ada, Countess of Lovelace, the daughter of Lord Byron. She wrote down instructions for when the Engine was built, and so can claim to be the world's first programmer. There is now a programming language called Ada in her honour.

strategies brought the price of electronic calculators down to within everyone's buying power.

Towards programming

There is a very important distinction between a calculator – whether mechanical or electrical – and a computer. A calculator waits for the user to enter some numbers and ask for the result; a computer can run programs, meaning that it can store sequences of instructions and run them over and over again on different sets of data. The idea of programming didn't come about exclusively with computers, and there are many examples of programmable machines down the years.

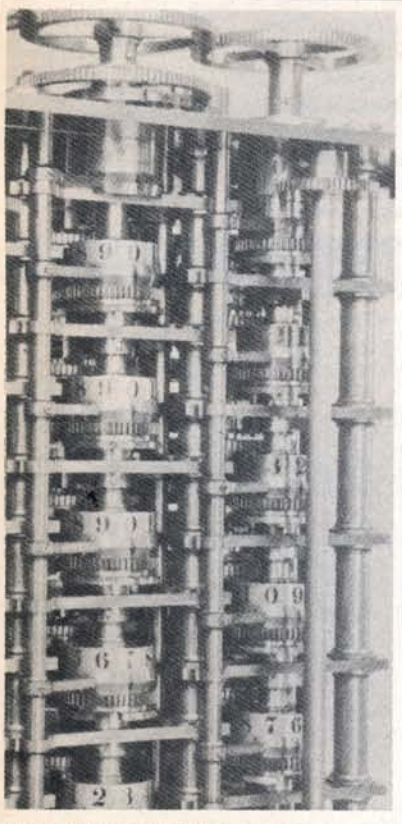


▲ The Jacquard loom

The breakthrough in programmed machines was the Jacquard Loom, invented in 1805, a device which profoundly affected the Industrial Revolution and presaged a number of computing techniques. Joseph Marie Jacquard (1752-1834) was a French weaver from Lyons frustrated by the manpower needed to weave complex patterns. Looms work by having a set of warp threads and a shuttle: depending on the pattern, some of the warp threads are pulled up, the shuttle passed between the up and the down threads to create the woof, and then different warp threads pulled up for the next shuttle pass.

Jacquard developed a mechanical system of levers and springs so that a series of punched cards controlled which warp threads were up or down at any time – a hole in the card causes the corresponding warp thread to be pulled up, otherwise it stays down. In this way, an entire pattern could be coded onto cards, just like a program.

Inevitably, the weavers in Lyons were upset at the unemployment prospects, and tried (unsuccessfully) to drown Jacquard in the Rhône. By 1840 they had seen the error of their ways and erected a statue to him.



▲ A section from Babbage's Difference Engine

Babbages and kings

Meanwhile, back in the world of mathematics and calculating machines, Devonshireman Charles Babbage (1792-1871) proved to be a major figure in the development of computers.

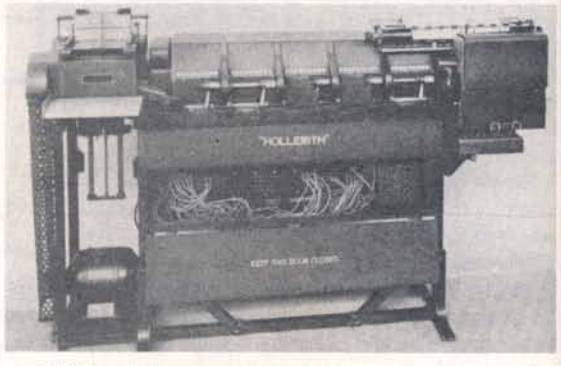
Babbage was a mathematician interested in automating some of the work on differential calculus that he was studying. He produced two proto-computers in the course of his life, the Difference Engine and later the more ambitious Analytical Engine.

In 1823 the government advanced him £1500 towards the cost of his Difference Engine. It was a mechanism of toothed wheels to calculate polynomial expressions, such as working out trigonometry tables (sines and cosines) and helping in the calculation of tides. An important innovation was the concept of an output method – the world's first printer (reportedly it wasn't Epson compatible). The display wheels on the Difference Engine were inked and the results printed directly onto paper, thus eliminating typographical errors.

In 1834 the money ran out and Babbage's workforce resigned. Babbage himself never finished the Difference Engine, although one was built in Sweden in 1855 to his designs. Instead, Babbage moved on to his Analytical Engine. This was to be steam powered, having punched card input stages and printed output, and modern analysis of his designs has shown that it genuinely would have been able to provide significant computing power, more than some early electronic computers.

It's all would-have-been, for despite spending £20,000 of his own money Babbage never got past building a few parts of the Analytical Engine. (The Science Museum in London has these on display.) An apocryphal tale has it that mechanical engineers now reckon that even had a full version been built using materials around at the time, the main drive shaft carrying the mechanical power to the various parts would have sheared under the stress.

You can see that not only did Babbage have some brilliant ideas on computing machinery design, but he also provided the inspiration for many of today's computer companies by working for years designing products that were never quite delivered.



▲ Hollerith's card sorter

Information not numbers

A closing chapter in the story of mechanical computing is due to Herman Hollerith (1860-1929). Until now, almost all the calculating machines mentioned had been built by mathematicians for their studies, but Hollerith made the first steps in what is now called Data Processing.

The US took a census of its population every ten years, and the 1880 census took eight years to analyse. Fearing that from 1890 onwards the processing would take more than ten years per census, the authorities were worried. Hollerith designed an electrically powered sorting and collating machine where the data was input on punched cards. Hollerith's machine processed the records for 63 million people in two and a half years. The US Census Bureau estimated the machines saved them 5 million dollars.

Hollerith realised his card-based data processing system had other business uses, and set up a company to market his machines. This he called the Hollerith Tabulating Machine Company, which in 1911 became International Business Machines Inc. IBM is now one of the biggest companies in the world, with a turnover bigger than many countries' gross national product.

EXIT

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ORCS AND DOVES

Tony Flanagan magicks his way through the new adventure from Level 9

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It's strange, I know, but ever since Christmas I've had this peculiar feeling that there's a small block of cement lodged deep in the pit of my stomach. Now there are two possibilities: either it's a piece of my dear old grandmother's home-made Christmas pud or...it's a lump of cement. Is it really possible that a an eccentric octogenarian with failing eyesight could somehow mistake cement for flour...?

This game is similar in style to Level 9's recent solo effort, *Gnome Ranger*, reviewed a couple of issues ago. Once again we are transported to a mythical land inhabited by a cocktail of out and out weirdos – Odin (renowned trumpet enthusiast), Boadicea (infamous anglo-saxon feminist) and Fungus the Boggitman, highly respected for his SF novel, The Trouble with Lichen.

You take the part of an Orc who goes by the enchanting name of Grindleguts. Orcs, as you're no doubt aware, are very smelly creatures who live in worm-infested holes and are forced to eat spiders to stay alive. (What I want to know is what are the council doing about it?) Indeed, it seems that Orcs have nothing very much going for them at all. Not only are they indescribably ugly but they lack any useful skills whatsoever (and that's without the benefit of a YTS scheme!).

▲ Knight in White Satin? I thought that was a song.

As Grindleguts is slightly less intelligent than his fellows he has been 'volunteered' to take on the odious role of hero. This involves being foolhardy to the point of insanity, attempting to solve impossible puzzles and generally dying several times over for some frivolous cause. Still, it's not your fault they strapped you to your horse or, kind dears that they are, that they entered you for the jousting tournament, knowing that you hadn't a chance in Hades of winning.

Are you sitting comfortably?

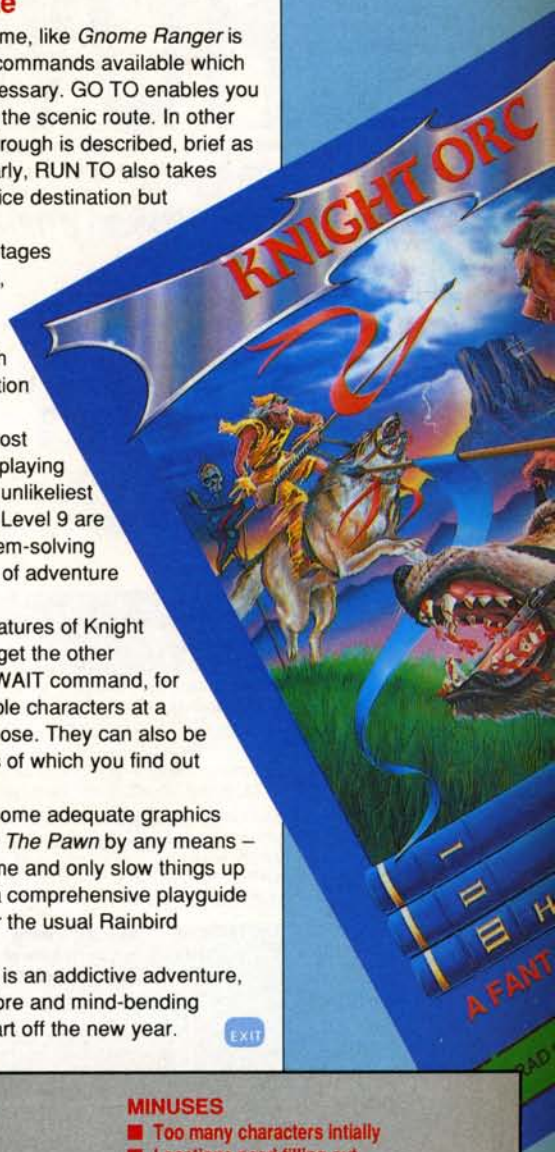
In this way, the trilogy of games begins. Your initial task is to avoid being killed by any of the many characters you encounter as you explore this side of Orc Mountain. Most of them are very vicious and delight in nothing more than beating an Orc or two to pulp, or watching them plead for mercy as in a James Anderton fantasy.

When you are not being beaten up yourself – usually lethally – you stand back and watch the characters beat the hell out of each other. If you can manage to survive long enough you must find a way of getting across the viaduct to Orc Mountain, the focal point of games two and three: A Kind of Magic and Hordes of the Mountain King.

Taking the scenic route

One of the advantages of this game, like *Gnome Ranger* is that there a number of powerful commands available which really makes map-making unnecessary. GO TO enables you to go to most destinations taking the scenic route. In other words, each location you pass through is described, brief as such descriptions may be. Similarly, RUN TO also takes you relatively quickly to your choice destination but omitting the descriptions.

On the other hand, the advantages afforded by such commands can, paradoxically, detract from the overall quality of the game. The short-cuts made possible by such commands mean that though action is speeded up a great deal of atmosphere is lost. One of the most rewarding features of adventure playing is when you find an object in the unlikeliest of places. The implication is that Level 9 are placing more emphasis on problem-solving than other traditional ingredients of adventure playing.



Still, one of the fascinating features of Knight Orc is the way in which you can get the other characters to work for you. The WAIT command, for example, can be used to assemble characters at a particular spot for a specific purpose. They can also be sent to perform tasks, the results of which you find out about later on in the gameplay.

The text is accompanied by some adequate graphics screens – not up the standard of *The Pawn* by any means – though these add little to the game and only slow things up anyway. The package includes a comprehensive playguide as well as a short novella, as per the usual Rainbird packaging.

There is no doubt Knight Orc is an addictive adventure, with lots of action, plenty to explore and mind-bending puzzles. A good adventure to start off the new year.

PLUSES
- High level commands
- Demanding puzzles
- Light, humorous touches
- Excellent playguide

MINUSES
- Too many characters intially
- Locations need filling out
- The action can get monotonous

ATMOSPHERE	■■■■■	CHALLENGE	■■■■■
INTERACTION	■■■■■	VALUE VERDICT	■■■■■

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AWAY WITH WORDS

In the electronic age, what future is there for books and writers? Ben Plouviez has a few thoughts on the matter.

All writers are bound to be conscious, and sometimes critical of their relationship with words. Like all good relationships, this has a physical side to it: some writers pay great attention to their surroundings and to the actual process by which they lay words on the page. Hemingway, for example, always wrote standing up, using a pencil for first drafts and typing (still standing) his final versions. Sharpening pencils – seven of them for the day's work – was one of the rituals by which he psyched himself up to write; perhaps it expressed the practical approach he liked to adopt towards his writing.

For many of us our PCWs have been our first introduction to a new sort of physical relationship to the words we write. The ability to edit and redraft pages over and over again is exciting – yet there is something faintly disturbing about having the power over words, skimming around sentences and pushing paragraphs around as though suddenly given the freedom of the road.

Perhaps word processing is physically a little like driving. Some people find it exhilarating, some tiring, some are largely indifferent to it. In general though, cars have certainly greatly changed our attitudes towards roads. Is word processing changing our attitudes towards words?

Perhaps, for example, we will find ourselves as readers becoming more sceptical of the writer's artful constructions. The brilliant counterpostition of themes, the significant repetition, the subtle ambiguity and the sly allusion may impress us less when we all have direct experience of how words are just like that in the electronic age: manipulable at whim, almost infinitely movable, and yet as volatile and insubstantial as spirits. That demystification would not necessarily devalue the writer's art: but it may just put a new perspective on it.

Tell me a story

What is it like to be a modern storyteller? Story-telling is older than history; yet what is the relation between the ancient storyteller who makes the story up as it is spoken, and the person whose story is structured and polished in front of the famous green screen? And what relation is there between the character in the ancient story whose existence depends on the human memory of speaker and hearers and the characters who come into being in the memory of a PCW?

William Shakespeare did not seem to be entirely sure how to spell his name. In every signature we have he spelt it differently. This was not uncommon; concepts of 'correct' spelling were quite foreign to the Elizabethans. This freedom shows in the way he treated words, using wordplay, punning and allusion with a naturalness no-one before or since could copy. As the idea of a correct spelling grew up, and dictionaries were written which ultimately became arbiters of how words should be spelt, so the kind of pun and wordplay at which Shakespeare excelled came to seem more forced and frivolous. The technical advance changed the writer's relationship to words. Will the word processor do the same?

What about the future of the book? One of the stock predictions of science fiction must be the "electronic book". Indeed, we already have electronic publishing, mainly of scientific and technical literature, where hard-copy (that's paper to you and me) is produced only on specific demand, and transmission to the reader can as easily be by telecomms link. If a book exists primarily in some sort of electronic storage medium, then at what stage does it become a finished piece of work? Why should it not go on growing and changing and being rewritten – perhaps not always by the same person – indefinitely? Perhaps literature will become more of a process than a product, with 'readers' (people accessing the book) doing so to spot and enjoy the alterations and reshaping of the story since they last looked at it, and maybe taking a hand themselves in the process of 'writing'.

Oral's well that ends well

And that does seem to take us back to where we were before, with the oral storyteller whose audience might chip in and make a few suggestions. Or perhaps even more closely it resembles the world of written texts before the invention of printing. The monks who copied manuscripts in mediaeval monasteries did not regard their texts – even their biblical texts – as sacred. They mixed commentary, explanation, judicious forgery designed to expose a heresy, and passages from other books into the texts they copied.

Electronic publishing may take us in the same direction; away from seeing literary work as a sacrosant product to be revered, towards an idea of it as something mutable and infinitely perfectible. Some even suggest that we will see the four-hundred year history of printing technology, with the artificial distance it imposes between writer and reader, as a massive red-herring in the history of human communication.

I think there are already developments which point this way. For example, on the present-day bulletin boards where you access and distribute computer programs with the help of a modem and phone link, programs are written and rewritten. This isn't necessarily to make them do any more but simply to make the code more elegant, or to save fractions of a second, or just for the joy of taking part in a creative process. Perhaps this will be the model for the EXIT

Beauty of jargon

WYSIWYG, if you haven't come across it before, stands for "What You See Is What You Get". It is also one of my favourite words. I don't believe in scorning jargon just because it is jargon: where would half our English poets have been without the jargon of seafarers to draw on? This bit of jargon is quite neat and a useful word. How about a campaign for WYSIWYG politicians?

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HOME-GROWN FANTASIES

Bored with commercial adventure games? Pat Winstanley looks at a new package to help you write your own.

THE PROFESSIONAL ADVENTURE WRITER

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After a hard day slaving over spreadsheets and databases, what better than to dive into the fantastic world of adventure games. And as PCW owners are such a creative bunch, why not go further and write your own games? It isn't as difficult as you might think, even if you think you have no programming skills, as Gilsoft have just released an 'adventure creator' for the PCW.

The Professional Adventure Writer aims to allow those with imagination to create text-based adventure games with their own scenarios, characters and puzzles. Several years ago Gilsoft released The Quill, which went from strength to strength as versions were written for most major home micros. Gradually add-on packages appeared which offered graphics and other goodies, until convoluted manipulation could produce games which stood out from the crowd. But integrating the various programs was a fiddly business, only to be tackled by experienced users. In response Gilsoft created Professional Adventure Writer (PAW), which is a combination of The Quill, its various bits and pieces and other new improvements.

Flexi-time

Adventure creator programs need to strike a balance between flexibility and user-friendliness, on the one hand taking the drudge out of routine programming while on the other allowing the author plenty of scope to present a game with individuality and original style. PAW scores highly in this department. All the basic adventure routines are built in – movement between locations, handling objects both singly or as a batch and even coping automatically with worn objects and containers. Various keywords are provided in the programming language to cope with these situations, but if you don't like the way PAW handles things or you want to introduce a special situation there's nothing to stop you ignoring the built-in provision and building a routine from scratch.

PAW comes predefined to know 106 words, which are divided into two types: conditions and actions. The 28 conditions are keywords which perform a test of some sort (rather like IF in BASIC) and cover questions such as the current position of the player or a particular object, whether or not an object is currently worn, carried or hidden in a container, what the player has typed in and the state of the 'flags' – the various counters and variables that you need to hold details as the game progresses. Random factors can be checked as can the length of time elapsed since the player's last input.

Having tested the state of the game, action keywords can be used to change the situation. Possibilities include getting, dropping, wearing and removing objects, swapping one object with another, creating and destroying objects, or placing them in specified locations. Containers are covered with PUTIN and TAKEOUT commands and most of the object handling keywords also have an 'auto' version to save time and memory.

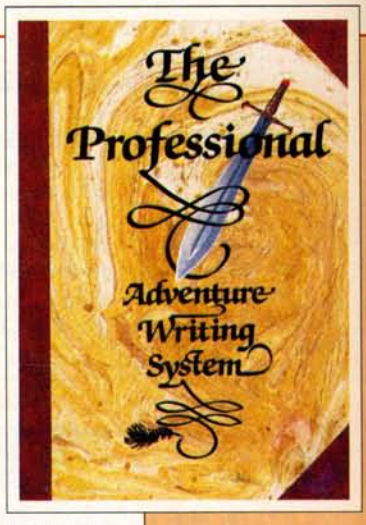
Up to 255 flags are available of which 60 are used by the system. System flags may be tested and manipulated by the author and their use is clearly documented. Action keywords are available to manipulate the values held in flags in a variety of ways eg. setting, clearing, adding, subtracting and copying. About the only functions not available are multiplication and division.

One very useful keyword is MOVE which allows an independent character to move around the playing area regardless of the player's position. Also available are separate keywords to define and alter both the weight of individual objects and the player's strength.

The screen display can scroll continuously or clear as each new location is visited. You can arrange to give your player both 'brief' and 'verbose' descriptions as required. Four different "What now?" type prompts are available and can be changed at will.

TIMEOUT allows the game to be played in 'real-time', ie. you can set a time limit for your player to respond in – very handy if you want to add a bit of urgency to the gameplay. Also available are various keywords to control formatting, listing of text etc. and a very handy feature which allows a special symbol to be inserted into messages which during play is replaced by the description of whatever object is currently being manipulated.

Saving and restoring the game position is available both to disc and the internal memory, and implementing an OOPS command (whereby you allow your player to undo his last move) couldn't be easier.



Getting it together

The PAW package consists of a text editor which is used to type entries for messages, location descriptions, conditions etc., a compiler to turn the ASCII text so produced into machine code and a run-time system which runs the compiled code.

Compiled systems like this have advantages and disadvantages. Typing lengthy location descriptions is simplicity itself as the writer can edit quickly and easily using

What is an adventure?

Adventure games, which are what PAW produces, are one of the oldest forms of computer entertainment. Essentially they are programs containing a large database of location descriptions and character details. Typically these follow Science Fiction or Fantasy themes such as magic, wizards, monsters, spaceships and so on.

The player has to solve a series of puzzles – set by the game designer – to reach some goal like rescuing a dragon from a ravening Princess. This usually involves travelling through various places collecting treasure, weapons and so on.

The player runs the game by typing in commands in psuedo-English, like 'Go through door and pick up lantern.' The better the game, the more complex the sentences it can understand. The language understanding part of the program is called the 'parser', which is actually a bona fide English word, not computer jargon!

Among the many well-known commercial adventure games on the PCW are *Hitchhiker's Guide to the Galaxy* and *The Pawn*.

Not cricket?

Perhaps you feel there's a suspicion of cheating in using an adventure writing system rather than programming the whole game from scratch? If so, you can set your mind at rest. All the big software houses use adventure writing systems as the basic framework on which each individual plot is hung. Infocom, Ram Jam, Level 9 and Magnetic Scrolls each have their own in-house system.

Although these systems aren't on open sale they are sometimes made available to writers developing games for a specific company and work in much the same way as publicly available systems such as PAW. The existence of these systems is the reason why games from a particular software house tend to have similar characteristics of text, screen layout etc. despite using widely differing scenarios.

In many respects PAW is as powerful as the various software houses' own systems, but of course this doesn't necessarily mean that you can immediately write adventures to their standard. The whole skill in creating an adventure is, like writing a play, in the planning, plotting and characterisation. Actually coding it into a program is the least creative part.

a normal wordprocessor, but testing and debugging can become a bind. In order to test the effect of changing a single figure in a condition the whole source file must be compiled and re-run, an operation which can take several minutes when the files get large.

And talking of text editing, the editor provided in the package is very basic and not conducive to fast work. If possible a separate word processor should be used, such as Protext. The PCW's RPED editor can only handle 200-line files, which isn't enough. You can get by with LocoScript as long as you make an ASCII file of your documents, but changing from CP/M to LocoScript to edit files and back again is a real pain.

Room to ramble

On the PCW you have around 60k of free memory to fit your game into. This can be supplemented in two ways: first, by taking advantage of PAW's very efficient text compression option which compresses text by around 40%. In addition PAW contains the facility for jumping out of the main program in order to access additional data held on disc. This procedure requires a modicum of machine code knowledge, so is for more seasoned programmers only. When you think how much text you can store on a floppy disc you can see just how complex your descriptions can be. Data accessed from disc could be extra text and even graphics screens. PAW doesn't have any commands to draw shapes on the screen, but there's nothing to stop clever writers from producing pretty pictures with other utilities and patching them in.

Up to 255 locations may be defined and supplemented with 255 user messages. Also available are 255 system messages, 60 of which are reserved (though they can be edited) while the rest are free for your own use. Even more text space can be obtained if you don't use all the 255 object definitions available.

Over 250 words of each of 6 types may be defined (and that figure doesn't include synonyms!) which coupled with a powerful parser gives plenty of scope. The parser easily handles inputs such as "Get all. Open the door and go south then get the bucket and look in it.". My only niggle in this department is that the player's inputs always appear on the screen in upper case letters which is not to my taste and can't be changed.

At the time of writing the PCW documentation isn't quite ready. However, it is promised to be very similar in style and content to that produced for the Spectrum version. Assuming this to be the case, two manuals will be provided (the Spectrum versions are around 70 pages each and very clearly written), one for the absolute beginner explaining the construction of an example game provided, with plenty of advice on design and use of facilities. The second manual will give an in-depth view of each keyword, the overall design and flow of the system, technical information for patching in external routines and detailed information on the use of the system flags. Nothing you need except an index will be missing.

```
GET   ALL   NOUN2   POCKET    ;Location 83 is inside pocket
            DOALL   83        ;Get all from location 83

GET   ALL   NOUN2   BOWL      ;Location 82 is inside bowl
            DOALL   82        ;Get all from location 82

GET   ALL   NOUN2   POOL      ;Location 81 is inside pool
            AT      55        ;Location 55 is room with pool
            DOALL   81        ;Get all from pool if at pool

GET   ALL   DOALL   HERE      ;Get all in current location

GET   _     NOUN2   POCKET    ;These entries deal with
            AUTOT   83        ;the getting of single objects
            DONE              ;similar to 'all' commands

GET   _     NOUN2   BOWL
            PRESENT 82
            AUTOT   82
            DONE

GET   _     NOUN2   POOL
            AT      55
            AUTOT   81
            DONE

GET   _     AUTOG
            DONE
```

```
>PUT ALL IN BOWL
The lump of modelling clay is in the bowl.
The chalk is in the bowl.

What should I do now?
>PUT THE BOWL IN THE POOL
The bowl is in the pool of water.

What next?
>GET ALL FROM THE POOL
You now have the bowl.

What next?
>GET ALL FROM THE BOWL
You now have the lump of modelling clay.
You now have the chalk.

What next?
>PUT ALL IN THE POOL
The lump of modelling clay is in the pool of water.
The chalk is in the pool of water.
The bowl is in the pool of water.

A>
```

Here is part of PAW's process tables that you would have to write to create a simple game of objects being manipulated as containers. Inset is a fragment of the resulting gameplay. Text following semi-colons in the table are comments added by the programmer as memory joggers and are ignored by PAW during compilation.

Pass it on

Because games produced with PAW run under CP/M Plus, they are equally suitable for both the PCW range and the Amstrad CPC6128 computers. All told there are around 1 million machines worldwide that can run PAW adventures, so if you want to sell your PAWed creations there's a good market.

No excuses

Now that PAW is available for the PCW, frustrated adventure writers have no excuse. PAW is easy to learn, quick to get into, and remarkably versatile. All you need is a methodical mind so that you can plan your adventure scenario properly before starting to implement it. With a little imagination, you can now produce games to rival the offerings from Infocom and Magnetic Scrolls, with all the extra features to be expected from a top class adventure.

There's still a good deal of work involved to reach that standard, and to be honest although you don't need any programming skills as such you do need the methodical programmer's mentality. You can expect many months polishing to achieve your finished game, but for anyone with a hankering to create original and exciting adventures the PAW offers a ready-built package to cope with the tedious side of things.

EXIT

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- Simple, convenient text entry
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- Games can understand apparently English sentences, not just keywords
- Lots of text storage means vast games possible

MINUSES
- Debugging is long-winded
- Graphics and external text file access requires machine code knowledge

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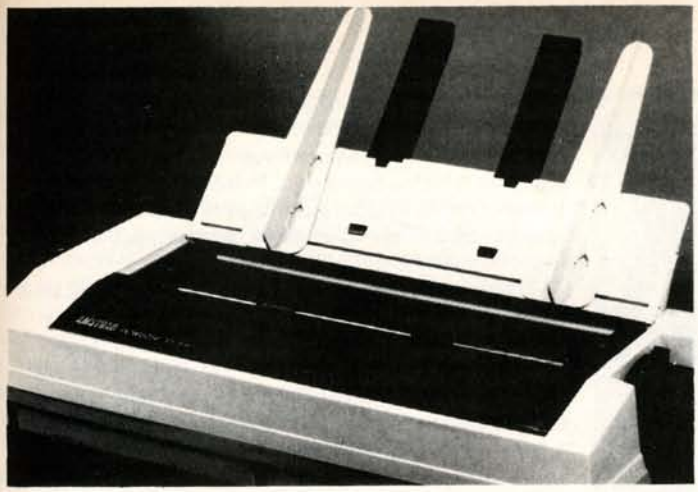

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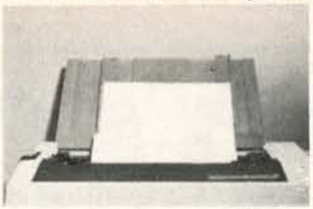

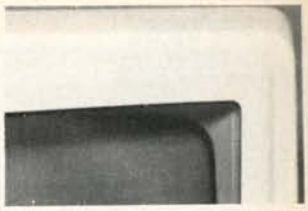

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BACK TO BASICS

Starting this month our BASIC-busting series takes the mystery out of type-in listings. At last, write your own programs!

There is one very good reason why you should learn to program computers, which is that it can make life easier for you. Honestly! Have you ever bought a commercial program like a database only to discover that despite the glossy advertisements it doesn't allow you to do the one vital thing you got it for?

If you can master the darkest mysteries of Mallard BASIC then you could write your own database program. This means that you can be sure that the program is *exactly* tailor-made to your requirements. Because you wrote it you will know how it works, so no more rooting around in manuals looking for the correct way to make the printout appear in condensed bold underlined superscript type. And if your requirements do change, you won't need to buy a whole new database system but you can modify your program to suit.

Even if the prospect of writing your own programs from scratch sounds a bit like hard work, a little knowledge of BASIC can be very useful. Most magazines print program listings for you to type in, and inevitably you find again that they don't quite do what you want. If you understand some BASIC you can soon get the hang of modifying the listings to do what *you* want, not what the original writer wanted.

Something completely different

To begin to understand how a program is constructed, let's see how to cook Tandoori Chicken Masala:

Tandoori Chicken Masala – feeds 4

1. Take 1 chicken and bone it.
2. Rub some tandoori paste well in and bake for 30 mins in a hot oven.
3. Make up 1 pint of Masala sauce
4. In a large pan, warm the sauce and stir in the chicken pieces.
5. Add 1/4 pint of double cream and simmer for 10 minutes.

Masala Sauce – 1 pint

1. 4 oz. Tomato puree
2. 1 fl.oz. lemon juice
3. 3/4 pint warm water
4. 1 tsp. Garam Masala

Essentially a recipe is a program for chefs, so think what your actions are in the kitchen: the first thing you do is to scan the recipe and make sure you have got the correct quantities of all the ingredients. To feed 8 you will need 2 chickens, lots of tandoori paste, 2 pints of Masala sauce and 1/2 pint of cream. Having got these together you then follow steps 1-5 in order.

There's one interesting thing about the way the recipe is constructed, which is that the instructions for the Masala sauce are written as a different block to the main recipe. When you get to step 3 in the main part, you go off to read the instructions for the sauce. You'll need 2 pints, so again double the quantities in the instructions, then follow steps 1, 2, 3 and 4 in the subsidiary recipe. Once all the ingredients for the sauce have been combined, you then go back to the main recipe and carry on from step 4.

If you understood all that then you can understand how to write programs. After all, programs are just a series of steps for a computer to follow, just like the steps in a recipe that you follow.

Pidgin fancier

Looking at a long program listing can be daunting, but in fact most of the commands that BASIC uses have been chosen to sound as much as possible like ordinary English words. Think of it as a kind of pidgin English. The best way to understand how to program is to look at an existing program, see how it works, and try to modify it.

First, a quick introduction to the most important concept in programming, 'variables'. Look back at the recipe above and consider how you worked out what quantities of ingredients to use. To feed four people you need 1/4 pint of cream, but you want to feed eight so you need 1/2 pint. What you have really done is to think of '1/4 pint' as the basic unit of cream to work with, and multiplied that by whatever was needed to convert the recipe quantities for the number of people you were cooking for.

It's just like those algebra lessons at school (sorry). "Let x be the amount of cream needed to feed 4 people, then the amount needed for eight is 2x," says the old maths teacher. Variables in programming are just like letters in algebra. They are just arbitrary names standing for numbers, like 1/4, or names. BASIC's variables need not be just 'x' or 'y', but almost any interesting name like 'fred', 'cost', 'cream' and so on, though you can't have any spaces in the middle.

So, have a look at this little program:

```
10 PRINT "What was your mileage at this refill"
20 INPUT newmileage
30 PRINT "What was your mileage at the previous
refill"
40 INPUT oldmileage
50 PRINT "How many gallons of fuel were needed?"
60 INPUT gallons
70 PRINT "Your MPG is"
80 PRINT (newmileage-oldmileage)/gallons
```

This is a program to perform a miles-per-gallon calculation for your car. It assumes that every time you buy

"REMEMBER THE DAYS WHEN WE DREADED GETTING 500 LINES"

Equal opportunities

Mallard BASIC runs exactly the same on 8000 series machines as on the new 9512. The only difference is when trying to do special functions with the printer, but we'll be sure to indicate clearly when that is the case later in the series.

fuel you fill up the tank to the top and note down your mileage and how much fuel you bought. The car's MPG is therefore the miles travelled since the last fill divided by the number of gallons just bought.

There are essentially two kinds of command being used here. `PRINT "something"` is the instruction to make BASIC print whatever is in the double quote marks on the screen (not the printer). `INPUT fred` is the instruction to make BASIC pause for the user to type something at the keyboard. The user is expected to input his number by typing it followed by pressing the [RETURN] key. Whatever number was typed is stored by the program in the variable referred to in the INPUT command – ie. 'fred' in this case. Variable names are not put in quote marks, but text to be printed literally goes in quotes.

What the program does then is to print on the screen the message 'What was your mileage at this refill', then pause for you to type the number in (a question mark appears as a prompt). The INPUT statement stores this in the variable 'newmileage'. The program then asks you in the same way for your old mileage, and stores it in the variable 'oldmileage', and gallons used, stored in 'gallons'.

Now here's the clever part where it works out the MPG for you. A little maths shows that the MPG is the new mileage minus the old mileage divided by the gallons used, so in BASIC-speak this is `(newmileage-oldmileage)/gallons`. The last two lines of the program deal with this: first, the message 'Your MPG is' is printed on the screen, then the result of the calculation is printed. Notice how the PRINT statement is used in a slightly different way for this last case: things in double quotes are echoed straight to the screen, but if you put a variable in a PRINT statement its value is printed out. All the MPG arithmetic here is done in the PRINT statement.

```
10 REM A program to calculate your car's MPG
20 PRINT "What was your mileage at this refill"
30 INPUT newmileage
40 PRINT "What was your mileage at the previous refill"
50 INPUT oldmileage
60 PRINT "How many gallons of fuel were needed?"
70 INPUT gallons
80 PRINT "Your MPG is"
90 PRINT (newmileage-oldmileage)/gallons
Ok
run
What was your mileage at this refill
? 5436
What was your mileage at the previous refill
? 5233
How many gallons of fuel were needed?
? 4.56
Your MPG is
 44.51754
Ok
save "mpg"
Ok
```

▲ Typing in and running the MPG listing

Line numbers

Have a go at typing in the mileage program and running it. Instructions for loading BASIC are in the 'Getting going' box, and you'll also find the 'How to type in a listing' box on this month's Listings pages useful.

Sharp-eyed readers may have spotted the numbers at the left of each line of a program. These numbers just tell BASIC which order the various lines of the program come in. You don't need to type the lines in the order they are printed on the page, since BASIC will automatically sort them into numeric order. So if you find you have accidentally missed out line 20, don't panic – just type it in anyway and it will be put in the right place.

Getting going

If you've never used BASIC before, you'll be wanting to know how to get going. You would do well to make up a special BASIC disc to work on: using DISCKIT, copy your main CP/M master disc onto a new disc.

This disc is full of files that are nothing to do with running BASIC, so now erase all files except BASIC.COM and J14CPM3.EMS, or J21CPM3.EMS if you have a 9512. (A quick way to do this is to type `ERA *.*[C]` – the PCW then asks you to confirm for each file in turn whether you want to erase it, so press Y for Yes at every name except the two you want to keep, where you press N for No.) This gives you a disc with plenty of free space to store any BASIC programs you may be creating.

This disc will now start up CP/M for you – whenever you want to run BASIC, turn the machine on and put this disc in the drive.

When everything has settled down to the A> prompt, type `BASIC` [RETURN]. You will see a welcoming message and the the prompt 'Ok'.

The PCW now expects you to type in some BASIC commands for it to do. Whenever articles tell you to "type `PRINT "Hello"`", do just that – after the 'Ok' prompt, type the line in question then press [RETURN]. If you typed it right, BASIC will do what you wanted, if you mistyped the line it will likely as not say "Syntax error". This is its stuffy way of saying, "I don't understand what you typed."

Whatever you do, remember that nothing you can type will damage the machine or your discs, so don't be afraid to try things out. If things appear to go wrong, press the [STOP] key until you see the Ok prompt, then you can get back to CP/M's A> prompt by typing `SYSTEM` [RETURN].

```
CP/M Plus  Amstrad Consumer Electronics plc
v 1.4, 61K TPA, 2 disc drives, 368K drive M:
A)BASIC
Mallard-80  BASIC with Jetsam  Version 1.29
(c) Copyright 1984  Locomotive Software Ltd
All rights reserved
31597 free bytes
Ok
```

▲ The welcome message from BASIC when you first start up.

Conventionally, the numbering for lines starts at 10 and increases in tens. Having a gap of 10 between consecutive lines means that you have the leeway to insert other lines later if you want to. For example, if you want to put a line between lines 20 and 30 you would just type `25 PRINT "...whatever"`, and the line would go in the right place. You could insert up to 9 lines (21 up to 29) between 20 and 30 in this way.

Whenever you type anything at BASIC's Ok prompt, it looks to see whether there is a line number at the start. If so, BASIC just stores the line as part of the program. If there is no line number it assumes that you have typed a command to be obeyed immediately, and it will try and do it. So, typing `PRINT "Hello"` will have the immediate effect of printing 'Hello' on the screen, whereas typing `10 PRINT "Hello"` will apparently do nothing. However, if you now type `LIST` you will see the line listed out on the screen, and if you type `RUN` then the command will be obeyed.

You could try typing in some of the listings in this month's Listings pages. Even if you don't understand exactly how they work, all will be revealed in next month's exciting instalment. Watch this space. EXIT

Arithmetic

Remember how you used to write sums out at school? Like 2 + 2 = 4, 10 ÷ 5 = 2, 5 x 4 = 20, 20 - 1 = 19? Computers are pretty good at arithmetic, and knowing how to do such calculations is quite useful.

Unfortunately the ÷ and x symbols are not on most computer keyboards, so the alternative symbols / and * are used. So, to work out the four sums above you'd do `PRINT 2+2`, `PRINT 10/5`, `PRINT 5*4`, `PRINT 20-1`.

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LANGFORD'S PRINTOUT

In which science fiction author and PCW owner David Langford presents some monthly musings for budding writers

COMPUTERISED PLOTS TO AVOID

A computer is a pretty science-fictional object to have around, so science-fictional that few SF writers caught on to the potential of a home terminal until the things were everywhere. Writers tended to prefer walking, talking, menacing robots and androids, which offered better drama. If Victor Frankenstein had merely stitched together a small word-processing system, his life would have been far more tranquil....

Faced with the challenge of setting SF in the complex, computerised tomorrow which seems inevitable, some writers retreat into fantasies of a primitive past or post-holocaust future where the only software problem for the fur-jockstrapped hero is working out where in the opposition's tummy to insert his pointed stick or four-foot broadsword. Others try to tackle the implications, sometimes successfully and sometimes with mind-numbing corniness. Computers and artificial intelligence have already spawned dozens of plot devices and run them so far into the ground as to evoke coarse laughter from editors you might have hoped to impress. Here are a few randomly selected storylines to avoid. Some of them worked once, but not any more.

Ten guaranteed sf duds

- All stories in which your Amstrad PCW is upgraded and becomes God. This brand of SF, known to aficionados as the shaggy god story, is particularly bad when treated seriously ("In the beginning was the word processor," etc.) or humorously (with the serpent of Eden turning out to be Alan Sugar).
- All plots wherein an insane, villainous computer intelligence is caused to sprain its operating system and go up in smoke when confronted with logical paradoxes (SF hero: "Everything I say is false!" World-dominating electronic brain: *Fzzzzzt*....), emotional tripe (SF heroine: "There are limits to your power, Machine! You cannot love... or weep." Mad computer dies of embarrassment) or plain dumb questions (Patrick McGoohan in *The Prisoner*: "Why?" Collapse of hyperintelligent computer complex, which might reasonably have come back with "Why not?").
- Any trick ending involving the final death-or-glory battle of a vast spacegoing attack fleet which fights against virtually impossible odds to penetrate savagely hostile planetary defences, and which finally smashes apart the opposition and reaches ground level, only for Time to stop and vast glowing letters to appear in the sky, saying GAME OVER – INSERT COIN.
- In an unsubtle reversal of the previous item, teenage computer-game addicts notching up colossal mega-scores in *Manic Space Goat Attack* find out that really they're operating remote-controlled weaponry responsible for the last defence of Earth against the ravening Vegan mind-hordes (or vice versa).
- Any plot in which high-tech computer hackers penetrate NASA (or Pentagon, or Kremlin, or NatWest) computer security in one paragraph of reasoning going something like this: "H'mm, this system was designed by the great Hasdrubal Bloggs, acknowledged world grandmaster of data security, so our chances of cracking it are pretty slim. Just for a laugh, though, let's try the password HASDRUBAL!" A short pause. "Well, that saves us a lot of trouble...."
- The brilliant idea of your word processor coming alive and electronically taking over the storyline... unfortunately this has been done too often with old-fashioned typewriters to stand being updated yet again. See for example Michael Bishop's nifty novel *Who Made Stevie Crye?*
- Anything with lots of glowing, hallucinatory scenes in which "computer space" is seen as a surreal geography through which hackers travel to battle the deadly electronic defences of the Pentagon, the Kremlin, Barclays, etc. Quite apart from that flawed film *Tron*, this whole "cyberspace" scenario is the trademark of William Gibson, who's done it three times already (*Burning Chrome*, *Neuromancer*, *Count Zero*), is busy with a fourth (*Mona Lisa Overdrive*), and who's so tempting to imitate that an entire US movement of "cyberpunk" writers has grown around him.
- Anything relying on a new loophole in Asimov's Three Laws of Robotics. Apart, that is, from the really glaring loophole which is mercilessly exploited by present-day computers: they're all too stupid to understand the Three Laws anyway. Adding extra Laws is definitely not cricket, even if Asimov has taken to doing it....
- Any attempt to lend conviction to an SF computer story by writing page after impenetrable page of it in a computer language, either real (especially if it's BASIC) or fake – see *Xorandor* by Christine Brooke-Rose, which also carries computer jargon into everyday expletives. "Booles!" people swear. "Debug!" they vilely continue.
- Any story involving any variation of this dramatic exchange. AGED SCIENTIST OR POLITICIAN: "Well, my friends, this is it! We've put total control over all the world's conventional weapons and nuclear arsenals into the electronic hands of the invulnerably armoured *Deusexmachina* computer complex, thus ensuring universal peace and harmony. It only remains for me to switch on the as yet untested artificial intelligence system, programmed by Dr Barmy Bloodlust just before we fired him, which will henceforth co-ordinate world affairs...." IDEALISTIC YOUNG SCIENTIST OR REPORTER: "I have this crazy hunch that we could be making some mistake!" (But it's too late. Classic example: *Colossus* by D.F.Jones.)

EXIT

Speaking of Asimov

Every red-blooded SF fan knows Asimov's Three Laws of Robotics: (1) A robot will not harm a human. (2) A robot will always obey a the orders of a human except where they conflict with the first law. (3) A robot will guard its own existence except where that conflicts with the first two laws.

I once devised an alternative, realistic version of the Laws of Robotics. (1) A robot will not harm authorised government personnel but will terminate intruders with extreme prejudice. (2) A robot will obey the orders of authorised personnel except where such orders would conflict with the Third Law. (3) A robot will guard its own existence with lethal antipersonnel weaponry, because a robot is bloody expensive.

Hasty disclaimers

This isn't a complete list: for example, I currently suspect that any further attempt to describe an electronic afterlife (people's intelligence transferred to software in vast computer complexes) will have to be incredibly innovative to outdo the treatment of this theme by Rudy Rucker (*Software*) and Frederik Pohl (*Annals of the Heechee*).

Doubtless a writer of genius could breathe new life into some of the moribund themes described here. Just make sure, before you spend too much time trying, that you *are* a writer of genius.

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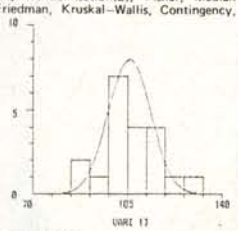

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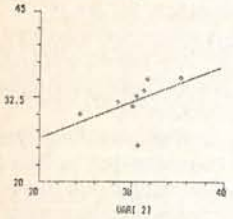

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- You can selectively retrieve records by means of an enquiry which is just a list of keywords. Those records which include the listed keywords will be retrieved. You can also retrieve only those records whose keywords include some minimum number of the keywords in the list.

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PLAYING TRAINS

Adrian Wilkins reports on another batch of near-as-dammit free software, and the clubs and libraries that distribute it.

Owing to a spot of politicking in the PD world (the gory details are in the box), this month's Public Domain choice comes from the libraries of Advantage, who style themselves the 'Independent User Group'.

User Defined Graphics

Although it may sound like the noise a hedgehog makes as it is crushed by a truck on the A39, UDG (for 'User Defined Graphics') is a program which enables you to to redefine any of the standard characters as they appear on the PCW screen, either singly or as a group (called an 'icon'). Right up the street for budding artists and those writing chess or bridge-playing programs.

UDG was written by John Stephenson, and is a hybrid between a BASIC program and assembler. The assembler bits (in a file called UDG.COM) need to be run first of all by typing the command UDG at the A> prompt. After this you then run BASIC and load the remainder (from the file UDG.BAS). The program is menu-driven, and you use the cursor keys in conjunction with the '1' key to toggle parts of the character dot matrix from light to dark. The example here illustrates how the 12 lower-case characters 'a' through 'l' have been redefined to represent be one continuous icon of a toy train.

UDG, as all PD programs, is not accompanied by any documentation other than a set of files on the disc which you have to print out for yourself. There is no support service to ring if you get stuck, although you don't need to understand any programming to get going.

UDG permits you to save your modified characters so that you may return to them later, and there is also a mode whereby the characters in question may be stored for automatic loading from CP/M. For example, you could save the character set containing the train as a command file TRAIN.COM which would be run prior to any other program which required to use the train symbols, such as a BASIC program.

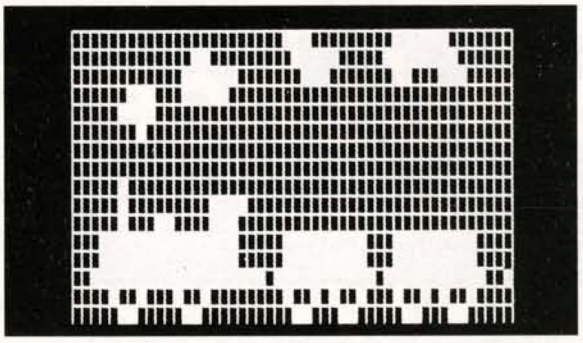
There are three pitfalls to point out:

1) Use a different range of characters which don't overlap with those normally used. I chose a,b,c and so on, but when I ran BASIC instead of announcing itself as "Mallard Basic with Jetsam" it said "M(smoke)(train)(train)(smoke)r(smoke) B(smoke)s(train)..."

2) Ensure you have plenty of spare space on the disc when storing character fonts. UDG is not clever enough to check for disc full errors, and would only write half a character matrix – running the resulting file can crash the PCW.

3) The character redefinition only works on the screen – even using BASIC's LPRINT command won't print them out onto paper. This is because the printer driver uses a different set of character definitions which are unaffected by UDG. However you can do a screen-dump by pressing [EXTRA] and [PTR] simultaneously (on 8000-series machines only).

EXIT



◀ Designing a new 'character' with UDG

Still good friends

As users of public domain software will know, there are a couple of different suppliers. The PD SIG ('Special Interest Group') are a major supplier, and have traditionally drawn on the resources of the PDSL (Public Domain Software Library). However, the PD SIG felt that the PDSL's library was becoming more and more cluttered with junk, old versions, and software that would only run on obsolete machines.

Accordingly PD SIG have taken the bold step of setting up their own library from scratch. At the time of writing they have only just published their initial catalogue for IBM PC compatibles, and we have to wait a little bit for CP/M software to reappear from this source. Watch this space in future months.

Rumour has it that – in a separate affair – an American-based public domain outfit called the PC SIG have been causing a spot of bother too. All PD software is catalogued by certain numbers (much as library books are), and the PC SIG has apparently threatened to take action because the PDSL used the same numbering system over here. PC SIG claim their cataloguing system is copyright, so now UK and US users hunting for PD software will have to use different reference numbers.

```
1 FOR I=1 TO 5 : PRINT : NEXT
2 FOR I=1 TO 9 : FOR J=97 TO 102 : PRINT CHR$(J); : NEXT : PRINT "    "; : NEXT : PRINT
3 FOR I=1 TO 9 : FOR J=103 TO 108 : PRINT CHR$(J); : NEXT : PRINT "    "; : NEXT : PRINT
4 FOR I=1 TO 5 : PRINT : NEXT
5 PRINT "TOOT TOOT"
6 FOR I=1 TO 5 : PRINT : NEXT
```

After running UDG, ▲this listing... produces this▼.

Where from?

UDG is just one program to be found on the 'PCW Graphics' disc from Advantage User Group – 14 Fauconberg Lodge, St George's Road, Cheltenham, GL50 3DT, phone 0242 222307. Even though the software is Public Domain, to cover admin charges the disc costs £7, or if you are a member (£12 a year), £6.

LISTINGS

Keep track of the figures with the 8000 Plus DIY spread sheet, and other BASIC goodies.

Spreadsheet

by Dave Atkin

A spreadsheet is one of those pieces of software that everyone needs, but you only realise how much you need it after you've used it for a while. Here is a spreadsheet that does the essential basics that professional spreadsheets do – the main difference is you don't have cough out £50 for it.

The idea of a spreadsheet is that it acts just like a big sheet of paper on which you are working out complicated computations. It's made up of a grid of cells – each cell is an area of the screen where you can print a number, a heading or a formula. Cells are laid out in rows and columns so you can neatly lay out your data. You can add, subtract, multiply or divide the figures in any cell and add in the headings to make it all make sense.

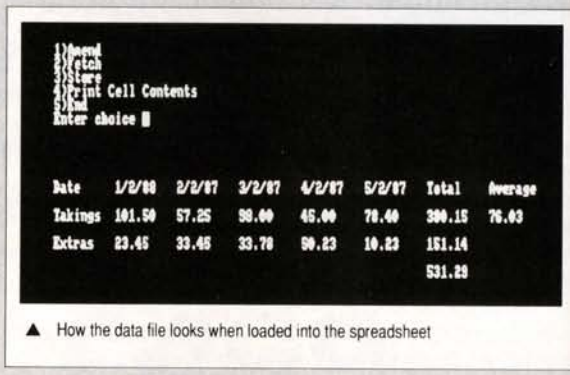
The real joy of it is that all the arithmetic is worked out automatically and if you change any figure the new totals are worked out – ideal for anything where you might want to try a few 'what if' options.

▲ Entering a formula

The cells in this spreadsheet are numbered A to J across the top and 0 to 9 downwards – a 10 by 10 grid. For example cell A0 is in the top left hand corner and J9 is the bottom right.

There are two ways of entering information. You can choose option one (Amend) where you will be asked for the cell number (put the letter first, eg. A2) and then you are asked whether you want to enter 'data' or a 'formula'.

Data is easy. This is just a number or some text which you type. It is copied into the specified cell, and you move on to your next entry. The formula option is for those times when



▲ How the data file looks when loaded into the spreadsheet

you want carry out some arithmetic in a cell, like saying cell B3 should be B2 multiplied by 1.15. When you mention a cell name in a formula you should put it in brackets and use the symbols + (add), - (subtract), * (multiply) and / (divide). Don't leave any spaces in your formula.

For example to add a row of figures you might enter a formula in cell B4 which read `(B0)+(B1)+(B2)+(B3)`. This would take the figures from B0 to B3 and add them together. The total will be printed in cell B4. Then put `(B4)/4` in B5 and you have the average. If you lose track of whether you have data or a formula in a cell just choose option 4 on the menu ('Print cell contents'), put some paper in the printer and the program prints out a hard copy of what is really written in the cell.

Since the values of the cells are calculated in the order A0 to A9, then B0 to B9 ... J0 to J9, don't make any reference in a formula to cells beyond the current one. If you try to set cell A2 to be H2 times 5, you'll get a nonsense result because H2 isn't known when A2 is worked out.

```
10 cl$=CHR$(27)+"E"+CHR$(27)+"H"                                                    06F1
20 DEF FNAT$(x,y)=CHR$(27)+"Y"+CHR$(x+32)+CHR$(y+32):PRINT cl$                      12AE
30 GOSUB 470:PRINT "1)Amend":PRINT "2)Fetch":PRINT"3)Store                          142D
40 PRINT "4)Print Cell Contents":PRINT"5)End                                        1398
50 INPUT "Enter choice ", A: ON A GOTO 110,60,430,480,510                           1139
60 PRINT cl$:PRINT FNAT$(1,5)"Enter name of data file ";:INPUT"",a$                 1797
70 GOSUB 460:PRINT cl$:a$=a$ + SPACE$(8-(LEN(a$)))                                  0F86
80 b$ = LEFT$(FIND$(a$),8):IF b$ = UPPER$(a$) THEN GOTO 90 ELSE GOTO 30             1638
90 OPEN "I",1,a$:FOR a=0 TO 9:FOR b=0 TO 9:INPUT #1,a$(a,b):NEXT:NEXT:CLOSE #1     1AF0
100 GOTO 180                                                                        0399
110 GOSUB 470:INPUT "Enter Cell number (eg. B2) ",b$:b$=UPPER$(b$):GOSUB 460        17A8
120 x=VAL(RIGHT$(b$,1)):Y=ASC(LEFT$(b$,1))-65                                       0E86
130 a$(x,y)="":PRINT "Select 1)Data 2)Enter More Data ";                            106B
140 INPUT  "",a:ON a GOTO 150,170                                                   0A13
150 INPUT "Enter data ",a$(x,y)                                                     0A86
160 INPUT "1) Finished 2)Enter More Data ",a: ON a GOTO 180, 110                    14D8
170 INPUT "Enter formula ",a$(x,y):a$(x,y)="."+ UPPER$(a$(x,y)):GOTO 160            185D
180 FOR y= 0 TO 9: FOR x= 0 TO 9                                                    0932
190 IF LEFT$(a$(x,y),1) <> "." THEN GOTO 410 ELSE x$ = a$(x,y)                      118E
200 IF LEN(x$) < 2 THEN GOTO 390                                                    0926
210 sign = (ASC(x$)-41)                                                             064C
220 IF MID$(x$,2,1)="(" THEN GOTO 300                                               09D1
230 g=1                                                                             01FF
240 g=g+1:IF g> LEN(x$) THEN GOTO 280                                               0B5B
250 h= ASC(MID$(x$,g,1))                                                            064C
260 IF h>47 THEN GOTO 240                                                           0848
270 IF h=46 THEN GOTO 240                                                           0848
280 a = VAL(MID$(x$,2,(g-2)))                                                       06CB
290 x$=RIGHT$(x$,(LEN(x$)-(g-1))):GOTO 320                                          0B8E
300 c=ASC(MID$(x$,3,1))-65:b=VAL(MID$(x$,4,1)):x$=RIGHT$(x$,(LEN(x$)-5))           14CD
310 a=VAL(d$(b,c))                                                                  04C9
320 ON sign GOTO 330,340,350,370,360,380                                            0B7D
330 d=ROUND(d*a,2):GOTO 200                                                         0846
340 d=d+a:GOTO 200                                                                  064F
350 GOTO 200                                                                        03A7
360 d=a:GOTO 200                                                                    052A
370 d=d-a:GOTO 200                                                                  0655
380 d=ROUND(d/a,2):GOTO 200                                                         086E
390 d$(x,y)=STR$(d)                                                                 0541
400 d$(x,y)=RIGHT$(d$(x,y),((LEN(d$(x,y)))-1)):GOTO 420                             0E49
410 d$(x,y)=LEFT$(a$(x,y),8)                                                        06AD
420 z=x*2+10:w=y*9:PRINT FNAT$(z,w)d$(x,y)" ":NEXT:NEXT:GOTO 30                     1824
430 PRINT cl$:INPUT "Enter name of data file ",a$                                   10B8
440 OPEN "O",#1,a$:FOR a=0 TO 9: FOR b=0 TO 9:WRITE #1, a$(a,b):NEXT:NEXT           1843
450 CLOSE #1:GOTO 30                                                                0627
460 PRINT cl$:PRINT CHR$(27)+"X"+CHR$(32)+CHR$(32)+CHR$(61)+CHR$(120):RETURN        16F5
470 PRINT CHR$(27)+"X"+CHR$(30)+CHR$(30)+CHR$(37)+CHR$(120):PRINT cl$: RETURN       16D4
480 PRINT cl$:INPUT "cell number";c$                                                0CA7
490 a=VAL(RIGHT$(c$,1)):b=ASC(UPPER$(LEFT$(c$,1)))-65                               11EC
500 LPRINT c$" "a$(a,b):GOTO 30                                                     08A3
510 GOSUB 460:END                                                                   058B
```

Do it the easy way

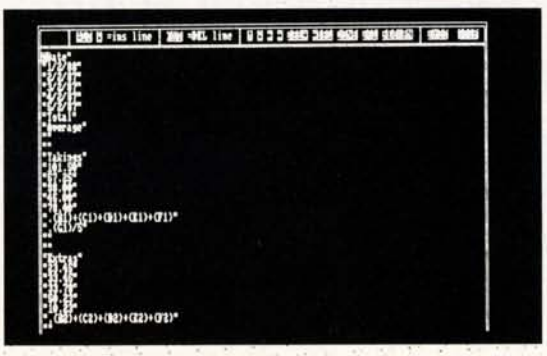
While you can fill up a spreadsheet by entering each cell individually from the 'Amend' menu choice, it is much quicker to type all the data into a file and load it in all at once. To understand this the best idea is to type some data into a spreadsheet and and save it (option 3).

Quit the program and load RPED, the BASIC text editor. (A brief guide on using RPED is in the CP/M manual.) Load the data file you saved your spreadsheet data in, and you will see a list of 100 pairs of double quotes. This represents every cell in the spreadsheet. By noting where the entries come you can see the lay-out – the first lines represent the first 10 cells across and so on. Once you have the hang of this you can just fill in the information here quickly and load the details in seconds. Press [EXIT], and your data is safely saved to the disc.

The spreadsheet's 'Fetch' option can be used to either read a previously stored spreadsheet, or to load a file of data you've prepared in RPED as just described.

You can of course then change the contents of any cell and the computations will automatically change. And if you want to keep a permanent record of your spreadsheet press [EXTRA] and [PTR] for a screen dump (PCW 8000 series only).

Those learning BASIC might be interested in the way the screen is split in two. This is done using escape codes to set up windows on the screen in line 470, and set back to normal in line 460.



▲ Using RPED to create a data file

Maze

by Michael Gibbs

34 lines of BASIC may seems a lot for a game but, Maze is out of the ordinary for BASIC listings. For a start it looks really impressive.

The program generates a random patterned maze which you have to cross from left to right. To do this this you use the keys A and Z to move up and down and / and ½ to move left and right. The first thing you do is choose whether you want to tackle the maze 'blind' or normally. For novices, pick the 'normal' option when you can see all of the maze. In 'blind' mode, for experts only, you can only see the parts you have already gone over!

After you have chosen you will be asked to press the Space bar. The time you take to press the space is measured to provide a random factor in the choosing of the maze patterns. After this there is a long pause while the maze is calculated. When it finally appears, press one of the cursor keys A, Z, / and ½ to make the cursor appear.

You are given a time limit which counts down to zero. If it expires you are back to square one – if you succeed your prize is being allowed to tackle another maze, but in a shorter time. The program also notes how many moves you made to cross the maze.

Because it is more difficult you are given more time to complete the blind maze but one or two experiments at the normal maze quickly proves that that isn't much easier. In fact if you are having difficulty following the way the cursor moves round the maze then running the blind maze first may give you a better idea of how it works.

There are several details about listing in this program for programming fans. The program does do one or two things with the cursor, and when you leave the program you will find the screen in reverse video. Either reset the PCW, or type into BASIC `PRINT CHR$(27)+"e"+CHR$(27)+"q"` to get back to normal.

```
10 DEFINT a-z:q=1:e$=CHR$(27)                                                    0997
20 DIM m(2,71,25):b$(1)="l":b$(2)="eeeiiim":b$(3)="jjjfffn":b$(4)="cccckgo"      1544
30 DEF FNat$(x,y)=e$+"Y"+CHR$(32+y)+CHR$(32+x):s=0:lv=1:w=70:b=1:z=1:v=1         1589
40 h$=e$+"E":PRINT h$                                                            063B
50 PRINT FNat$(22,14);:INPUT"CHOOSE MAZE TYPE (0 blind maze/1 normal maze)",g$   1C0A
60 d=VAL(g$):IF d>1 OR d<0 THEN 50 ELSE tt=1500-(1500*(d=0))                     11F1
70 PRINT e$+"f";FNat$(33,16);" PRESS SPACE TO CONTINUE ";                        136E
80 WHILE INKEY$<>" ":u=1+(3*RND):WEND                                            0E48
90 PRINT FNat$(33,16);"        PLEASE WAIT        "                              0B7F
100 FOR y=1 TO 2:FOR x=1 TO 25:FOR j=1 TO u:NEXT                                 10A5
110 m(y,71,x)=ASC(MID$(b$(2),1+INT(RND*7),1))-96:NEXT:NEXT                       120C
120 GOSUB 320:IF done=0 THEN 120                                                 09FA
130 done=0:t=tt-(150*lv):c=0:w=70:v=1:q=1:z=z+1                                  0F7A
140 IF t>=700 AND z=3 THEN z=1:q=2                                               0B68
150 IF t<700 THEN t=700: IF z=3 THEN z=1:q=2                                     0E0D
160 PRINT h$;e$+"p"                                                              0563
170 FOR y=1 TO 25:a$="":FOR x=0 TO 70:a$=a$+CHR$(32+(d*(96+(m(q,x,y))))):NEXT    1648
180 PRINT FNat$(9,y+2);a$:NEXT:PRINT e$+"q":x=0:y=12                             128E
190 GOSUB 320:GOSUB 320:GOSUB 320:i$=INKEY$                                      0E1A
200 PRINT e$+"q";FNat$(39,1);"TIME : ";t;FNat$(20,29);"MOVES : ";c;              152E
210 PRINT FNat$(40,29);"LEVEL : ";lv;FNat$(60,29);"SCORE : ";s;e$+"p":t=t-1      176E
220 IF t<1 THEN 280                                                              05F6
230 IF i$="" THEN 190                                                            05E1
240 c=c+1:p=m(q,x,y):k=ASC(i$)                                                   09C8
250 PRINT FNat$(x+9,y+2);CHR$(128+p)                                             0C39
260 x=x+(k=169 AND((p AND 2)/2))+(k=47 AND x>0 AND(p>8))                         0F84
270 y=y-INT(k=97 AND y>1 AND(-1*(x=0) OR (p AND 1)))+(k=122 AND(-1*(x=0) OR(p AND 4)/4)AND y<25)  1CEA
280 PRINT FNat$(x+9,y+2);e$+"q";CHR$(144+m(q,x,y)):t=t-1                         10AA
290 IF t<1 THEN s=0:lv=1:w=70:b=1:v=1:PRINT FNat$(40,12);" GAME OVER ":GOTO 50    1A6E
300 IF x=71 THEN s=s+INT((70/c)*1000):lv=lv+1:PRINT FNat$(40,12);" WELL DONE ":GOTO 70  1D46
310 GOTO 190                                                                     03A1
315 IF done <>0 THEN 340                                                         06E7
320 a$=b$(1+((m(z,w,v-1)AND 4)/4)-(2*(m(z,w+1,v)>8)))                            0E43
325 m(z,w,v)=ASC(MID$(a$,1+INT(RND*LEN(a$)),1))-96:v=v+1                         1088
330 IF v=26 THEN v=1:w=w-1:IF w=-1 THEN done=1                                   1130
340 RETURN                                                                       038B
```

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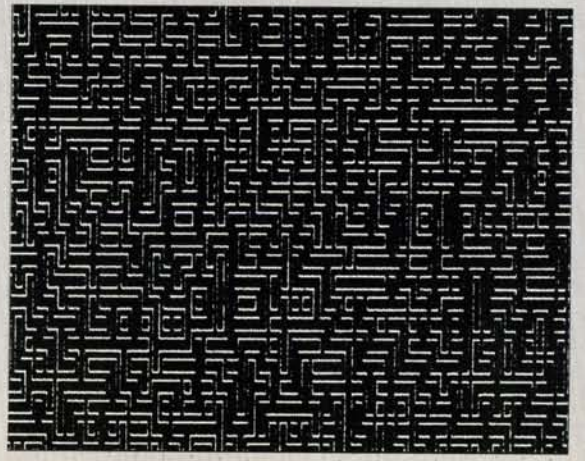

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PCW Prompt

by T.J. Rochester-Farrell

For anyone who really wants the PCW to organise their life, here is the ultimate program. You can type in your busy schedule with times when you have to do various important tasks (like 8pm WATCH DALLAS) and then as long as you don't switch the PCW off or use it for any other purpose, the program will remind you at the correct moment.

First you have to set the PCW clock to the right time. You can do this using the ordinary CP/M utility DATE.COM as found on your CP/M discs (type `DATE` [RETURN] at the A> prompt and follow the prompts).

Then run the alarm program. When prompted just type in the number of messages you require and enter the message, the hour and the minute you require for each of the alarm calls one after the other. The PCW will show the time on the screen and at the correct moment it will bleep and flash away at you until you press any key. Then you will see your instructions printed on screen. You can use messages of up to 255 characters (including spaces) so the instructions can be pretty detailed.

```
 11 30 0


      DON'T FORGET AT  11  30  0    Have a cup of coffee
A>
```

While you're away

The ultimate gimmick though is that you can use it to run programs on your PCW while you aren't there! By entering an `x` as your last message, instead of bleeping the program pauses until the time that you specify, and at the appointed hour exits to CP/M.

If you were to write a Submit file (say called ALARM. SUB) containing first the line `BASIC ALARM` and then on the next line the name of any program you wanted to run in CP/M, you could set up the program to run in the middle of the night. You will need SUBMIT.COM, BASIC.COM, the CP/M program you want to run and the BASIC alarm program on the disc in the drive.

Type `SUBMIT ALARM`. BASIC will load and the alarm program will run. Type in `x` when asked for the message, and the time when you want the next program to start. Then go away. When the correct moment arrives the alarm program closes BASIC down and returns you to CP/M and the rest of the Submit file is run, ie. your CP/M program.

This might well be useful for someone wanting to use a modem in the middle of the night when the phone rates were cheaper, or just to surprise somebody late at night!

```
10 esc$=CHR$(27):cl$=esc$+"E"+esc$+"H":on$=esc$+"e":of$=esc$+"f":PRINT cl$      14E6
20 DEF FNat$(x,y) = esc$+"Y"+CHR$(31+y)+CHR$(31+x)                              0E87
30 PRINT "        TYPE MESSAGE       ( up to 255 characters inc. spaces )       14EA
40 PRINT : PRINT "                 ENTER  x FOR TIME TO FINISH"                 129F
50 PRINT : PRINT "                   ENTER TIMES AS 24 HOUR" : PRINT            128A
60 INPUT "NUMBER OF MESSAGES REQUIRED ";n                                       10A3
70 FOR q = 1 TO n                                                               054E
80 INPUT "MESSAGE ";a$(q)                                                       0856
90 INPUT "HOUR ";h(q)                                                           0754
100 INPUT "MINUTE ";m(q)                                                        0923
110 NEXT                                                                        032B
120 PRINT cl$                                                                   042E
130 PRINT of$                                                                   0436
140 FOR Q = 1 TO N                                                              05A1
150 PRINT h(q)"  "m(q)"  "a$(q)                                                 06A2
160 NEXT                                                                        0335
170 FOR u = 1 TO 2222 : NEXT : PRINT cl$                                        0CED
180 DEF FNt(x) = x-INT(x/16)*6                                                  0940
190 FOR t = 1 TO n                                                              05AB
200 WHILE h<>h(t) OR m<>m(t)                                                    08C9
210 h = FNt(PEEK(64502!))                                                       06D8
220 m = FNt(PEEK(64503!))                                                       06F3
230 s = FNt(PEEK(64504!))                                                       0712
240 PRINT FNat$(5,5) h m s                                                      083F
250 WEND                                                                        031C
260 IF a$(t) = "x" OR a$(t) = "X" THEN 350                                      0B0D
270 WHILE INKEY$=""                                                             06FE
280 PRINT CHR$(7)                                                               0538
290 OUT 247,240 : OUT 247,240                                                   07D0
300 FOR a=1 TO 500: NEXT                                                        084E
310 WEND                                                                        0315
320 PRINT FNat$(12,8+t+t)" DON'T FORGET AT  "h" "m" "s"     "a$(t)               1185
330 FOR e = 1 TO 1111 : NEXT                                                    0931
340 NEXT t                                                                      0368
350 PRINT ON$ : SYSTEM                                                          07CD
```

How to type in a listing

Load up Mallard BASIC – at CP/M's A> prompt, put the CP/M master disc in and type `BASIC` [RETURN].

Now you see the 'Ok' prompt. Just type in the lines of the listing exactly as they are printed on the page, including the line number at the start, but *not* the check number at the extreme right.

The numbers at the right are for use with the 8000 Plus listing checker program, as printed in issues 10 and 14.

Mistakes made before you press [RETURN] can be corrected with the [DEL] keys, otherwise you will have to use the editor. Suppose you have made a typing error in line 100: type `EDIT 100` and then you can use the cursor keys and [DEL] keys to correct it. Press [RETURN] when the line is alright.

When you've finished, save the program to a disc by the command `SAVE "FRED"` (choose your own appropriate file name instead of FRED). To run the program, type `RUN`.

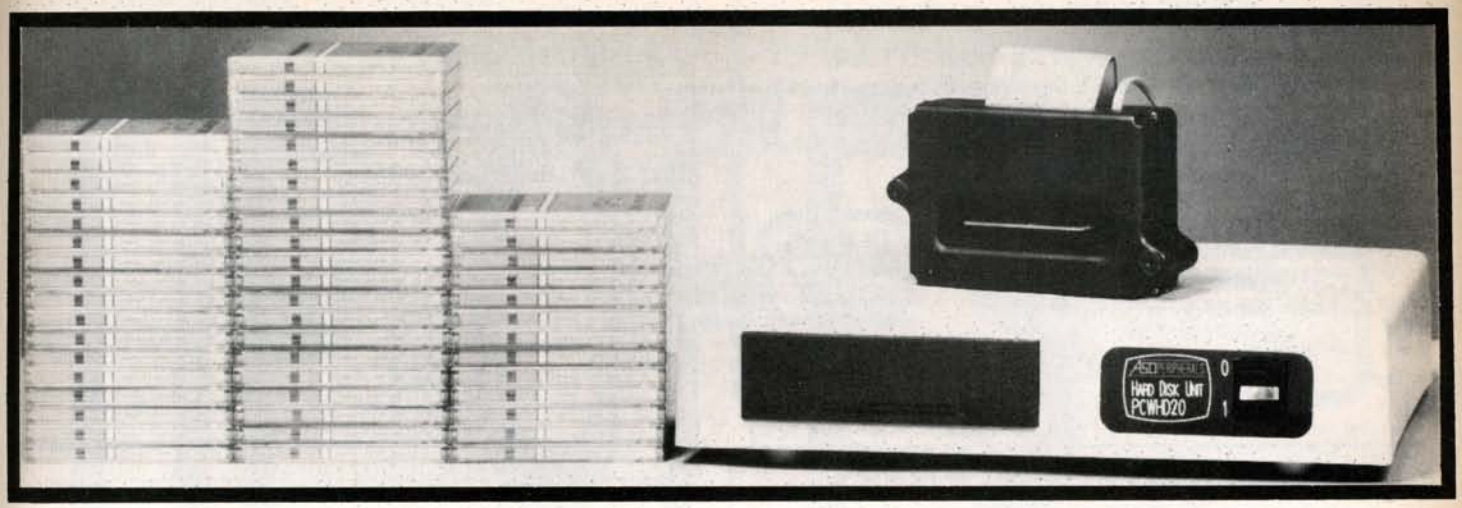
Programs rarely run first time, but when BASIC encounters a mistake it tells you roughly what line the error is on. Use the EDIT command to correct it.

You can rerun the program another day by loading BASIC up and, with the disc you saved the program on in the drive, `LOAD "FRED"` then `RUN`.

```
      TYPE MESSAGE      ( up to 255 characters inc. spaces )
              ENTER  x FOR TIME TO FINISH
                ENTER TIMES AS 24 HOUR

NUMBER OF MESSAGES REQUIRED ? 3
MESSAGE ? Have a cup of coffee
HOUR ? 11
MINUTE ? 30
MESSAGE ? Go out for lunch
HOUR ? 12
MINUTE ? 30
MESSAGE ? x
HOUR ? 15
MINUTE ? 30
```

PCW 8256/8512/9512



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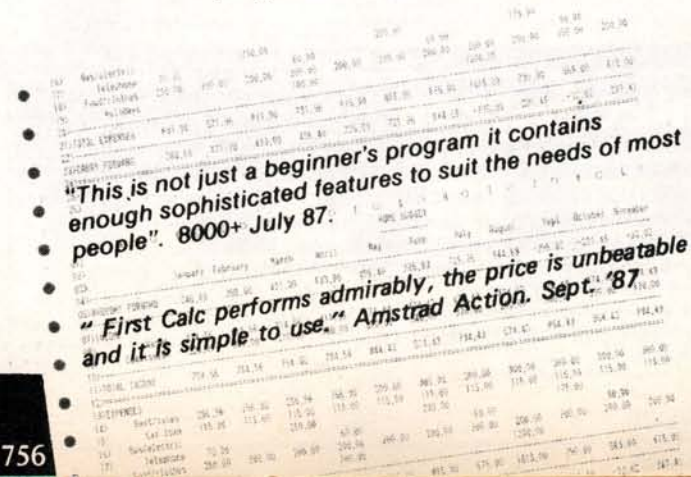

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TIP-OFFS

The pages with more tips than a cabful of Japanese tourists

Being taken for a ride by your PCW? Put yourself in the driving seat by reading the next few pages, and collect a bagful of lucrative LocoScript tips. And if you know some sneaky shortcuts or things the manual's missed in any well-known program, tell us: the best directions win £30! This month's money goes to Robert Goddard of Dorset for his graphical description of LocoScripted bar-charts.

Making a daisy change

There is no straightforward way of changing the daisywheel in mid-document on the 9512 to print, for example, a word in italics or a section in a different typeface – but, by using the fact that pressing the [PTR] key pauses printing at the end of a line, you can do it. Here's how to get a word in the middle of a line printed in italics or some typeface requiring a print wheel change.

The trick is to set the line spacing to zero (with the [f4] menu or the (+LS0) command) so that the printer will not advance the paper at the end of a line. Print one line with the normal text in it and stop where the italics are to go, pause the printing, and change wheels. Then print the italics, pause, change wheels again, and continue.

First prepare two phrases: phrase X containing the codes (CR+0), (+LS0) and (+ReV) followed by a carriage return; and phrase Z containing a carriage return followed by the three codes

Called to the bar

Owners of 8000 machines and LocoScript 2 can create effective bar charts to present their data with simply and easily.

While editing a document, press [f2]=Layouts and select 'new layout', then enter the following settings:
Left margin [f1] at 05
Right margin [f1] at 85
Line spacing [f4] set to 1/2

Set a simple tab [f3] every 5 spaces With [f7], name the layout 'Bar chart'

Get back to the main editing screen (by [EXIT]ing twice) and create a phrase under the letter X consisting of five solid boxes – you get these by pressing [ALT]+[f7] to go into 'symbol' mode and then [SHIFT]+X five times. (To define the phrase, place the cursor just before the five boxes, then do [COPY], move the cursor to just after the boxes, press [CUT] and then X.

LocoScript 2.12 owners can use the LOCOCHAR character designer to define a solid grey box character which makes even better looking bars. To get grey, just space your character dots out a bit rather than having every single dot position black.

To create the vertical (y-) axis, put one vertical line ([EXTRA]+<) say eight spaces in from the left-hand margin on each line. The lines don't join up on screen but will on the printout. The numbers for the y-axis look best in pitch 17 subscript and their position on the axis can be shown by an underline character ([SHIFT]+hyphen). You can use a redefined vertical line as described in the "Professional Boxing" tip overleaf to make things neater.

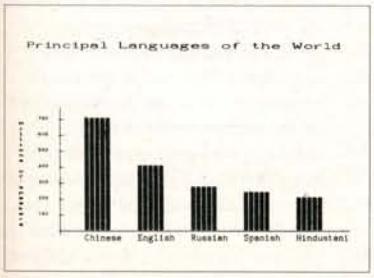
The horizontal (x-) axis can be done quickest by putting the cursor at the left-hand edge of the axis and typing the codes (+UL)(+RA)(-UL). This turns underlining on, goes to the right margin and turns underlining off, so underlining the whole line.

The bars themselves are created by tabbing to the required places and then pasting in the five solid boxes held in the X phrase ([PASTE]+X). Paste the phrase in as many times as you need to represent the data values in question.

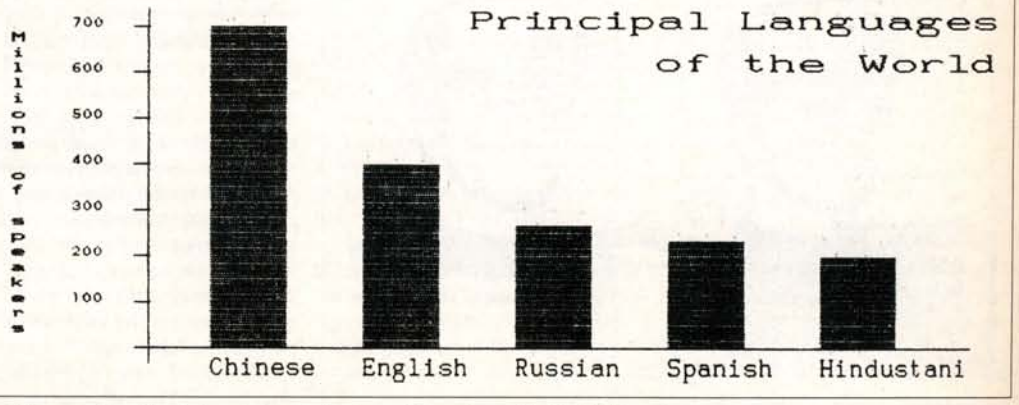
The great advantage of these bar charts is that they can go into the middle of normal LocoScript text documents, and look really effective in the middle of reports. You don't need to mess around feeding pages through the printer twice printing first the text and then the graphics.

Robert J Goddard
Sturminster Newton, Dorset

▲ Defining your box in Locochar



▲ Using the ■ symbol to make the bars



▲ Using a grey box defined in Locochar to make the bars, and a Locochar-redefined vertical line

(-CR),(-LS) and (-ReV). Immediately before the phrase you want to italicise, paste X in. The cursor moves to the beginning of the next line. Now type in tabs and spaces to the point where the italicised section is to start and enter the text to be italicised. At the end, paste Z in and, on the next line, type a combination of tabs and spaces to take you to where the normal text is to resume.

All this shows on screen as three lines, but prints out on one. You can't use proportional spacing since you are relying on the fact that a space takes up the same width as any other character to get the columns on the three overprinted lines to correspond, but any other pitch will be OK.

The (+ReV) and (-ReV) codes don't affect the printing, but serve to highlight the italicised area so that if you forget to do a [PASTE]+Z which turns ordinary line spacing back on you will have a visual warning!

When the printer is typing out your document, watch for the line with the italics in it and when it starts to type out, hit the [PTR] key. It stops at the end of the line at the carriage return (which doesn't advance the paper because the line spacing has been set to zero). Change the printer to your 'Script' print wheel (the 9512 print wheel which passes for italics), then press [EXIT]; the printing restarts. Press [PTR] again immediately and the printer stops at the end of the next line, the one with just the italic phrase. Change the wheel back and hit [EXIT] again to continue normally.

If you want italic text on more than one line, you'll have to put a (-LS) code at the beginning of the italic line and a (+LS0) at the end, or all the lines will go on top of each other.

Jonathan Clatworthy
Sheffield

● *TipOffs Editor adds: Proper Amstrad italic daisywheels, as opposed to the Script typeface, for the 9512 should be available shortly. In the meantime, as the 9512 printer is a modified Nakajima (a reasonably standard format machine) there may be some other makes of italic wheels around which will fit – if you find any, let us know!*

Photocopying photos

You can produce perfectly adequate desktop publications by photocopying, and this is usually the cheapest method of reproduction for small-scale publications. However, the disadvantage is that if you photocopy photographs, they come out very badly, all the grey tones being converted to harsh black or white.

What you're supposed to do is to 'screen' or 'half-tone' photographs intended for printing. This converts them into a pattern of dots that can be photocopied. However, photocopying shops can't do this (not on the spot, anyway) and printers charge around £5 per photo for doing it.

An economical alternative though is to use 'Letraset HT' – this is a sheet of white dots which you place between your photo and the copier glass, so that the photocopier's scanning device effectively sees a screened photo. The copies will then look authentically grey.

Each sheet of Letraset HT (roughly A4 in size) costs £4, and is available from any art shop or good office stationer's. It isn't traditional rub-down Letraset, so you can re-use one sheet over and over again.

Beryl Asino
Kingstreet, Avon

▲ Before ▲ After

The best possible paste

Very often when experimenting with some of LocoScript's fancy italics, bolds and pitch commands, you have no idea of the final appearance because none of these effects can be shown on the PCW screen.

However, you can test out your enhancements by copying the parts you want to test, including the codes of course, to phrases. Exit via 'finish edit' to the disc manager screen. Press D for direct printing and paste the phrases just copied, each followed by a [RETURN] – you can thus check on their appearance without having to print the whole document.

Particularly if you want to check on a number of special effects this can save considerable time.

H C de Jongste
Claygate, Surrey

Professional boxing

One of the minor irritations of printed boxes in LocoScript is that they don't come out very neatly. Although it is possible to join up the vertical lines by using half spacing, the horizontal ones produced by underlining still do not connect properly at the corners and leave either a gap or an overlap which looks scrappy and amateurish.

A solution for owners of LocoScript 2.12 is to create a new character using the LOCOCHAR program. The character required is a vertical line at the extreme edge of the available space between the top and bottom lines of dashes. For frequently used tables a 'mask' can be created and stored as a file. If centre-tabs are positioned half way between the vertical lines, data can be entered without disturbing the lines on the screen.

S T Payne
Great Missenden, Bucks

Singular

	Masc.	Fem.	Neut.
Nom.	hic	haec	hoc
Acc.	hunc	hanc	hoc
Gen.	huius	huius	huius
Dat.	huīc	huīc	huīc
Abl.	hōc	hāc	hōc

▲ Your new modulus character in Locochar

Tails you win

Owners of old dot matrix printers may have found that when the tails on printed letters like *g* and *p* disappear, the usual cure – a good dowsing of the print head with WD40 – only resuscitates them for a short while. The only real remedy may well be to clean the pins on the printer themselves.

With the print head still tethered to the printer by its copper braid, take a crosshead watchmakers screwdriver (if you can't borrow one, they cost around £5) and remove the four tiny bolts from the printing side of the head. Keeping the metal striker part of the print head uppermost, (black plastic and printing face downwards) carefully ease the metal striker part away from the black plastic housing holding the pins. Put the black plastic piece on the table with the printing face downwards.

Note the position of the pin tails on a circular diagram. With a pair of eyebrow tweezers, carefully withdraw the pins and lay them on a circle. Remove the return leaf springs ring. It has a small protrusion which slots into a matching slot on the plastic case so you can't put it back in the wrong position – the Koreans have obviously met Murphy. Beneath the leaf springs ring, there's another packer ring which exactly matches the leaf springs ring. Beneath that is a fibre washer to stop dust.

Douse the plastic printing head and particularly the fine slots in which the pins slide with lots of WD 40 – old printers will have an amazing amount of muck there.

Reassembly is the reverse procedure. The whole procedure takes around thirty minutes. For testing, printing in draft makes it easy to see which pin is playing up, and after cleaning, printing a few pages in NLQ without the ribbon in place will work off excess solvent.

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DESERT ISLAND TIPOFFS

Living on a desert island is not as idyllic as you might think; you'd have to work around eight hours a day just to survive – not leaving you much time for using your PCW. So, here are eight old favourite time-saving CP/M tips:

1) Putting the boot in on Prospell...

'Boot' (or self-starting) discs run a program – say your Prospell disc – immediately you switch on the machine, or reset it by pressing [SHIFT]+[EXTRA]+[EXIT]. You save the fag of running CP/M first, and circumvent that A> prompt.

Run up CP/M normally with your CP/M master disc, and at the A> prompt type `PIP` [RETURN]. When the asterisk appears type `M:=A:J*.*` [RETURN]. When the asterisk reappears type `M:=SUBMIT.COM` [RETURN].

Insert the program disc for the utility that you, want to make self-starting, ie. the Prospell disc in this case, and still at PIP's asterisk prompt type `A:=M:*.*` [RETURN]. Now for the clever bit: at the asterisk type `A:PROFILE.SUB=CON:` [RETURN]. Type `PS` and press [RETURN] finishing with [ALT]+Z.

Now press [SHIFT]+[EXTRA]+[EXIT] and you should see Prospell start up automatically.

2) ...and on other programs

What you've done is to 'copy' the keyboard input, ie., the letters 'PS', to a new file called PROFILE.SUB. Also on the Prospell disc there's now the file J14CPM3.EMS (or J21CPM3.EMS if you have a 9512) which contains all the guts of CP/M; whenever you switch on the PCW, it looks for a file ending in .EMS and loads that (your LocoScript program files end in .EMS too). Then it looks for a file called SUBMIT.COM, and if it can find that, will take whatever is contained in a file called PROFILE.SUB (if present) and treat that as if it were keyboard input.

So, by sticking these three files on any program disc (SuperCalc, Mini Office or whatever – but not LocoScript, which doesn't run from CP/M, and is self-starting anyway) and putting the required commands into the file called PROFILE.SUB, you can make any disc self-start. Into PROFILE.SUB you'd put whatever you would normally type to run the program; viz., where you typed `PS` in Tip 1, you'd type `SC2` for SuperCalc 2, `OFFICE` for Mini Office Professional, and so on.

First you'll have to check you have at least 47k free on your disc (look at the disc in LocoScript, or by CP/M's `SHOW` command). If not, you'll have to create space by erasing some of the files you don't use; if that's impossible, you won't be able to make a boot disc.

3) Profile sub

Your PROFILE.SUB file can store not just the command to run the program, but the commands you'd key in at the beginning of the program too – you just put a `<` before each one. For example, suppose you always load a file called DIABOLI.CAL when you run SuperCalc2. The sequence of keystrokes you'd type in would be [RETURN], then `/L` to 'load', then the name of the file `DIABOLI`, followed by a [RETURN] and an `A` to ask for all of the file to be loaded. The / in SuperCalc is a special character and for various obscure reasons has to be entered in your PROFILE.SUB file as a double slash, ie. `//`. So, you'd want the following in your PROFILE.SUB:

```
SC2
<
//LDIABOLI
<A
```

To make a text file like this with PIP (as in tip 1) would be tricky so it's easier to create the file in RPED. Run CP/M and at the A> prompt type `BASIC RPED`. Select f2 'edit new screen', insert the disc you want to be self-starting, and give the filename as PROFILE.SUB. Up comes a screen onto which you can write text; enter the commands required, as above, each line ending in a [RETURN]. You can use the cursors and delete keys, and if you want to delete a line, use CUT. Press [EXIT] twice to leave RPED, and then copy J14CPM3.EMS and SUBMIT.COM onto your boot disc as in tip 1. Your self-starting, file-loading disc is ready for action.

4) Pip options

If you want to copy some files, but not all, from one disc to another – say from the M: drive to the A: drive – the command `PIP A:=M:*.*[C]` will ask you for a yes-no confirmation (you don't press [RETURN], just y or n) of each file before it sends it across, letting you select which ones you require. A lot easier than specifying all the names individually!

▲ How your directory should look for a self-starting disc

▲ Making your file-loading PROFILE.SUB using RPED

5) Command line editing

The [COPY] key, or [ALT]+W, will recall the last command line you typed in – so, if you aim to type `PIP A:TEXT.324=B:DOCUMENT.JAP[S JAPAN^ZQOKAMA^Z]` but put M instead of B and get an irritating error message, don't retype the lot: just press [COPY], use the cursor and delete keys to move the cursor back and make the required changes, hit [RETURN], and the correct command will be executed.

6) Clearing up

You can create a command `CLS` which will clear the screen in CP/M as follows. Make sure there is 5k free on your CP/M start-of-day disc, that it contains PIP.COM and SUBMIT.COM and type `PIP` [RETURN]. At the * prompt type `CLEAR=CON:` and then press [EXIT], type a capital E, press [EXIT] again, and type capital H (don't type any [RETURN]s here). The [EXIT]s appear to have no effect, don't worry. End this part of things by typing [ALT]+Z.

At the asterisk which reappears, type `CLS.SUB=CON:` and then type `TYPE CLEAR` and hit [RETURN]. Finish again with an [ALT]+Z. Press [STOP] to leave PIP.

What this does is to set up a file of 'Escape codes' which when TYPEd to the screen clears it. The SUBMIT file merely saves you having to type TYPE CLEAR.

Now, as long as you have SUBMIT.COM on your disc, you can clear your CP/M screen by typing `CLS.SUB` [RETURN]. Even better, if you have SETDEF.COM on your disc and type `SETDEF [ORDER=(SUB,COM)]`, typing `CLS` alone will work. (Normally, when you type CLS [RETURN] CP/M looks for a file called CLS.COM to run; the SETDEF command makes it look for a file CLS.SUB instead.)

7) Don't interrupt

You often find you want to interrupt an operation without actually abandoning it – to change discs, for example. Pressing the [f5] key (or [ALT]+S) will temporarily stop any operation in CP/M and [f3] (or [ALT]+Q) resumes from that point.

8) Unerasable files

A convenient use for SET.COM is to make precious files 'read only' – ie. to effectively write-protect individual files, making them unerasable even by the dreaded ERA *.* command until further notice.

Copy SET.COM from your CP/M master discs onto your M drive. On a 9512, just put in the CP/M master disc and type `PIP M:=SET.COM`; on the 8000s SET.COM is on side 3 of the master discs and PIP.COM on side 2, so you need to put in side 2, type `PIP` [RETURN], put in side 3, type `M:=SET.COM` [RETURN] and then [STOP].

Then insert the disc with the files to be write-protected and type at the A> prompt `M:SET QABALISM.666[RO]` (or whatever your filename is: wildcards like `M:SET *.DOC[RO]` are allowed). This declares the file to be 'read only', so QABALISM.666 is now unerasable until reset to read-write by a similar process ending with the command `M:SET QABALISM.666[RW]` which declares it 'read and writable' – hence erasable – again.

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Masterpaint	Database	19.95	17.96
Masterscan	Database	69.95	62.96
Matchbox	Quest	29.95	26.96
Maxam II	Arnor	79.95	71.96
Micro Simplex (8512)	Micro Simplex	114.85	103.37
Mini Office Professional	Database	29.99	26.99
Modula 2	Hisoft	49.95	44.96
Money Manager Plus	Connect Systems	29.95	26.96
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Mouse/Interface	Electric Studio	129.95	116.96
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Newsdesk International	E.S.P.	49.95	44.96
Newsfile	M.A.P. Computer	149.00	134.10
Nominal Ledger	M.A.P. Computer	49.00	44.10
Nominal Ledger	Camsoft	49.95	44.96
Nominal Ledger	Compact	69.99	62.99
Nominal Ledger	Amsoft	33.00	29.70
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Nucleus Interface	Compact	99.99	89.99
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Pocket Reportstar	Micropro	49.95	44.96
Pocket Supersport	Micropro	49.95	44.96
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Access

VISA

These pages provide a comprehensive guide to the Amstrad PCW software. Published in three monthly parts, this time it's the turn of Word Processors (including Desk Top Publishers), Accounts/ Payroll packages and Utilities. We've set out to cover every important piece of software we could lay our hands on, and to give you enough information to decide whether they are suitable for you.

All software will run on both the 9512 and the 8000 series machines, though the former's daisywheel printer cannot print graphical output.

The selection isn't comprehensive, but the software listed here represents what we think is the best of that currently available.

As well as a brief summary of what they do, the main Plus and Minus points for each program are listed – Pluses have a by them, Minuses a . Those we think are particularly noteworthy have a corner flash. Have fun window shopping!

WORD PROCESSORS

LocoScript already comes bundled with its own word processor, so you might not think of buying another one as a priority. In fact, whatever you may have read in some magazines, LocoScript is a pretty good wordprocessor and you won't find many editing and layout functions it doesn't have. Its principal disadvantage was its slowness, but the release of LocoScript 2 has lessened that.

There are advantages to be had in changing. LocoScript cannot run from CP/M, and this may cause you trouble.

Many other word processors have a built-in 'mailmerger' program. This is a way of doing bulk mailshots; you store your address list in a data file, and write a letter with labelled gaps where you want the names and addresses to go. Then, when you print, the letter comes out once for each address, with the information in its correct place. Also, you often get a spelling checker thrown in free – look for one which allows its dictionary to be modified so you can include non-American spellings.

One thing's for sure, whatever word processor you buy it will be totally different to operate from LocoScript. The PCW keyboard is custom built to run it, and if you change you will have to get used to some arcane choices of keys to do even simple operations. Also, you won't be able (very easily) to use all the printer styles that you can in LocoScript, though there will be enough to get by with.

LocoScript 2 — *Essential purchase*

£19.95 • Locomotive Software • 0306 887902

As bundled with new 9512, the new version of everyone's first word processor. If you know how LocoScript 1 works, you'll have minimal relearning to do, and it puts right (almost) all the defects of the old version at a rock bottom price. Greek and Cyrillic alphabets, and Version 2.12 even lets you define up to sixteen characters of your own design.

PLUSES • MINUSES

- 'Find page' command makes moving around faster
- Superb range of foreign accents and symbols available
- Can now drive daisywheel and other printers
- Has DISCKIT's formatting and copying built into it
- New 300-page manual
- ※ Mailmerger and spelling checker not included
- ※ Inconvenient for regular CP/M users
- ※ Still no word counter!
- ※ Still slow at Find, Exchange and scrolling

LocoSpell — *A must for LocoScripters!*

£39.95 • Locomotive/Amsoft • 0306 887902

The ultimate spelling checker for LocoScript users. It is run as a simple menu choice while you are editing a document normally, and you can check either an entire document or only a paragraph. When it finds an error, it suggests a correction . Reasonably fast, given LocoScript's inherent sloth.

PLUSES • MINUSES

- Runs totally from within LocoScript
- Can do small sections of a file
- Suggests alternatives for misspelled words
- Reformats the text as it makes corrections
- Provides the much-missed LocoScript word counter
- ※ Can't remove spellings you don't like (eg *-ize*) from dictionary
- ※ The manual gets bogged down sometimes
- ※ Slow at scrolling the dictionary window

Pocket Protext/Protext — *Best CP/M wp*

£39.95/£59.95 • Arnor • 0733 239011

The best CP/M wordprocessor. Very fast at moving around large files, and packed with features. Works with key combinations rather than menus, but uses LocoScript keys too. Comes complete with a good spelling checker, a lightning fast word counter and a very powerful mailmerger. 'Pocket Protext' is a stripped down version – essentially the same word processing features, but no spell checker or mail merger, and lacking one or two incidental facilities like two column printing. Specify which machine you have when buying.

PLUSES • MINUSES

- Complete with spelling checker/word counter
- Packed with features, eg. calculate facility, text editor for writing programs, 'print to screen' option etc.
- Lets you work with two documents at once
- You can do all of CP/M's functions without ever leaving the word processor
- Very fast at moving around, doing exchanges and so on
- Extremely powerful and flexible mailmerger is almost a word processing programming language in its own right
- ※ Forces you to learn another new set of control keys to use it
- ※ Not as slick as LocoScript in its printer controls

LocoMail — *Best buy!*

£39.95 • Locomotive/Amsoft • 0306 887902

As a mailmerger for LocoScript, it's difficult to see how anything could be better than this. It runs directly from LocoScript, and can process any LocoScript commands. Has many advanced features and is highly recommended for all LocoScript users.

PLUSES • MINUSES

- You don't have to run it from CP/M
- Can print any LocoScript text formatting commands
- Can automatically rejustify paragraphs after insertion
- Can insert numeric calculations into letters
- Can read data from non-LocoScript (ie. ASCII) files
- Large manual, with example files on disc
- ※ No way to sort and filter addresses before a print run

THE GOOD SOFTWARE FILE

WORD-PROCESSORS

Qmail — Great value!
£29.95 • Proteus Computing • 01-748 2302

A mail merger specifically designed to work with LocoScript files. It scores over LocoMail in that it has a simple but effective database system to allow you to choose your target for a mailshot by marking them with 'attributes' and selecting – eg. only those customers who bought your product X.

PLUSES • MINUSES
- Reads LocoScript files and prints all LocoScript commands
- Well-designed database is ideal for mailmerging
- Database 'attributes' provide advanced selection capability
- Manual is lacking in examples
- No numeric calculation capability
- Doesn't read non-LocoScript files

Prospell
£29.95 • Arnor • 0733 239011

A stand-alone spell checker for use with almost any wordprocessor that runs on the PCWs. Reads LocoScript, WordStar and ASCII files, and allows you to make corrections directly, view the context, change the dictionary etc.

PLUSES • MINUSES
- Checks LocoScript and WordStar documents directly
- Displays the context of a suspect word
- Can edit misspellings directly from Prospell
- Anagram and crossword solvers too
- Doesn't work with LocoScript 2 files
- Processes files of 15k or more in sections

Teach Yourself LocoScript
£14.95 • LINC • 0273 776576

Disc of teach-yourself lessons for LocoScript. Better written and organised than most tutorial programs. The advantage over a book is that you can try things out as soon as you read about them, and see the effect on the text you are reading.

PLUSES • MINUSES
- Well organised lessons for you to browse through as you like
- Well-pitched style of writing does not talk down to you

TempDisc
£11.95 • Thurston Brown • 0395 68385

A set of ready-made TEMPLATE.STDs made up of fancy patterns of exotic characters for you to embellish and use with LocoScript. Essentially for social/personal business use. You could win £10 from the suppliers by designing your own!

PLUSES • MINUSES
- Using it tells you a lot about the intricacies of LocoScript
- You can achieve professional results without reading too much of the LocoScript manual
- You could write you own templates for free by reading the LocoScript manual

Easy Labeller
£34.44 • M.A.S.S. • 0603 630768

Labelling program which stores your names and address list and will print out in label format selected items from it.

PLUSES • MINUSES
- Useful options like printing out current date
- Good search facilities
- Range of printing options will fit most stationery
- Data needs an entire disc to itself
- Data entry is slowed by returning to main menu between labels

Label Printer
£25.00 • Microdraw • 0622 685481

Very similar program to Easy Labeller if not quite as powerful. Usual features of a labeller and you can store comments with each label's data.

PLUSES • MINUSES
- Menus simple – easy to get the program going
- Fast data entry
- Can store comments with each entry
- No import or export of data
- Data needs an entire disc to itself

Pocket WordStar — It's Wordstar!
£49.95 • MicroPro/Davis Rubin • 0386 853610

For many business users, word processing meansWordStar. Almost everything you could need in a text processor is here and despite the title this "Pocket" version has all the features of the original. Efficient and proven, but now showing its age and there are alternatives unless you are committed to WordStar already. £20 extra buys the De Luxe version with spell checker.

PLUSES • MINUSES
- Probably the world's most widely used word-processor
- Documentation is complex but well structured
- Includes a mail merge utility
- Keystroke commands fully described on on-screen menus
- You can save your own favourite customised version
- Doesn't make full use of the PCW keyboard and printer
- Page and margin formatting commands are awkward to use

AnsibleIndeX — Author's best buy!
£49.50 • Ansible Information • 0672 62576

Takes a LocoScript file and compiles an alphabetical index with page numbers from all the words marked. You mark the words to be indexed by using LocoScript's (+RV) code. The price includes the AnsibleCheck word counter /proof reader program too, which is also available separately at £19.50.

PLUSES • MINUSES
- LocoScript documents don't have to be converted to ASCII
- Can 'invert' phrases, eg 'Smith, Fred' rather than 'Fred Smith'
- Can produce a single index over several different files
- The output index is not a LocoScript document until you convert it
- Can only index words appearing literally, not general topics

NewWord — Powerful and proven!
£69.00 • NewStar Software • 0277 220573

NewWord sets out to exploit the WordStar market by doing the same job better. It uses much the same key commands as WordStar and will even edit documents prepared under WordStar. Comes with a spelling checker, and the on-screen help is better than WordStar's, though the keystrokes are still as obscure.

PLUSES • MINUSES
- Does everything WordStar does, even reads files from WordStar
- Spelling checker included
- Can un-erase words and lines
- Onscreen help better than WordStar's
- Full reformatting of text within mailmerger
- Weak on use of keypad and printer support
- Many of WordStar's disadvantages such as formatting troubles and obscure commands

Credit Controller
£24.95 • HPA Systems • 08697 508

A disc of ready made templates for use with LocoMail, turning it into a credit control system. Produces a lit of debtors to chase and writes suitable letters depending on the status of the customer.

- Makes clever use of LocoMail
- Saves you having to plough the LocoMail manual
- If you don't already have LocoMail it is expensive
- You could write your own templates for free by reading the manual

ACCOUNTS • PAYROLL

Sage Accounts — Best general system
£100.05 • Sagesoft • 091-284 7077

An integrated accounts package consisting of purchase, sales and nominal ledgers. For another £50 you can buy Accounts Plus which also has invoicing and stock control. The package is aimed at small companies with the emphasis on ease of setting up. But there are a number of limitations — in particular the package cannot cope too easily with rapidly increasing numbers of customers and suppliers.

PLUSES • MINUSES
- Clean, tidy and logical screen layouts and menus
- Easy to set up and use with excellent documentation
- Good audit trails and VAT reports
- Can produce formatted trial balances
- Restrictive account numbering system
- Only single Nominal ledger and VAT analysis per item
- Does not cater for settlement discounts
- Won't print remittance advice slips
- Prints out in 17 pitch, which is cramped on 9512 printer – need 17 pitch daisywheel

Digita Business Controller
£99.95 • Digita International • 0395 45059

Not a full accounting system, but a very easy-to-use package with an excellent manual. Nominal ledger already set up and you can be up and running in minutes. No aged creditor/debtor lists can be produced, and problems with VAT handling mean it's not really for VAT registered businesses. For other small business though it's very good value.

PLUSES • MINUSES
- Delight to use with a very good manual
- You can get the system working in minutes
- Financial ratios can be included in reports
- VAT handling very cumbersome, suit non-VAT registered business
- No facility for producing aged debtors/creditors list

Compact Accounts — Versatile
£199.99 • Compact Software Ltd • 0703 611214

Another very large integrated package supplied on several discs and consisting of sales, purchase and nominal ledger together with invoicing. The package is available on much larger micros, and since the format in which data is produced is the same as on PCWs, the system is particularly suitable for users planning to upgrade their hardware at a later date.

PLUSES • MINUSES
- Audit trails are an auditor's dream.
- Includes a facility to allow data to be used in WordStar, Multiplan or SuperCalc 2.
- Superb prepayment facility.
- Can run a number of companies separately.
- Easily transported to bigger computers.
- Lots of disc swapping necessary.
- Can be slow to use — it runs in Mallard Basic.
- A couple of mildly annoying quirks in cash allocation routine and account code system.

M.A.P. Accounts — Powerful!
£149.95 • MAP Systems • 061-624 5662/3

This is a very powerful package moved onto the PCW at a fraction of its cost on larger micros. The size makes it a little cumbersome to use, but apart from that there are very few significant problems. The integrated suite includes the same five modules as Camsoft, but they are supplied on four sides of disc, making it effectively impossible for the software to be run as an integrated system on an unexpanded 8256.

PLUSES • MINUSES
- A very comprehensive and professional package
- Very good audit trails.
- It's possible to run the sales and purchase ledgers over a different time period from the nominal.
- Facility for handling prepayments and accruals
- Able to print full management accounts.
- The size of the programs means lots of disc swapping.
- All normal responses need to be in upper case.

Cornix Simple Accounts — Easy to use
£49.95 • Cornix • 0462 682989

Simple cash-book style package which allows you to keep track of debtors and creditors (though not aged ones). Simple to use and you can make changes if you make a mistake. Slow to use for complex operations and number of entries in given period is limited, but very good simple program for small businesses.

PLUSES • MINUSES
- Simple, easy-to-use program
- Can correct errors
- Keeps track of debtors and creditors
- Slow for complex operations
- Ability to alter figures won't please accounting purists

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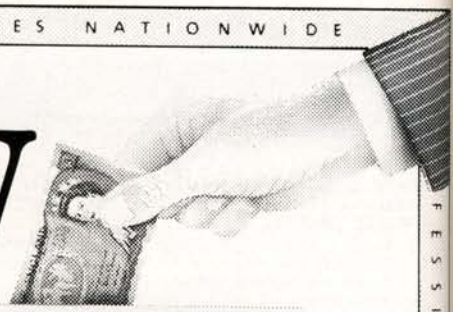

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THE GOOD SOFTWARE FILE

ACCOUNTS • PAYROLL • UTILITIES

Camsoft PSIL — *Good for small company*
£149.95 • Cambrian Software • 0766 831878

Consists of five integrated packages: Sales, purchase and nominal ledgers, invoicing and stock control. In terms of sophistication it falls somewhere between the Sagesoft package and the larger systems from MAP and Compact. But it's easier to run than the larger packages since all the software can be squeezed into the M drive. Good package for a small company.

PLUSES • MINUSES

- Comes installed for PCWs and can be run efficiently by 8256 or 8512.
- No need for pre-printed stationery.
- Excellent sort and search facilities.
- Invoices shown on screen as you create them.
- ※ Constant need to input full five-digit account codes.
- ※ No final accounts reports available on nominal ledger.
- ※ No facility to run the ledgers in different accounting periods.

Cavalier Install
£99.95 • Load & Run • 0322 72116/73128

A comprehensive integrated package. Comprises 'Intact' accounts and 'Instock' stock control, available separately for £59.95 each. Well designed, easy to run and powerful enough for most businesses.

PLUSES • MINUSES

- Other packages (eg. 'Teleadd' address book) can be added too
- Comprehensive range of features when used as a package.
- Sophisticated features in Instock section covering pricing and order suggestion.
- Flexible accounts, traps most mistakes and gives useful report summaries
- Interesting forward planning facility in stock control
- ※ Manual gives you a confusing number of options

Anagram Accounts
£86.25 • Anagram Systems • 0403 59551

Sophisticated package for users familiar with accounts. Small details like discounts and VAT are handled well but no permanent records are kept on disc and you have to use the extensive report printing options.

PLUSES • MINUSES

- Invoice printing is easy.
- Handles customer details efficiently
- ※ Key presses are rather obscure
- ※ Best to have some idea of accounts before using it

Sandpiper Accounts
£149.95 • Sandpiper Software • 0978 358832

This package is described as a 'simplified' integrated system and is aimed at inexperienced users. But although it offers a large number of features at a competitive price, it suffers from some serious drawbacks. In particular the limited audit and enquiry facilities may well make it unsuitable for many businesses.

PLUSES • MINUSES

- Comes ready installed to run from the M drive.
- Price includes three months' telephone support.
- ※ Very poor audit trails
- ※ Lack of detail on nominal ledger.
- ※ Analysis of sales and purchases very slow.
- ※ It would be easy to wipe off transactions by accident mid month.
- ※ The documentation is confusing.
- ※ You have to telephone to find out your pass number before you can use the package

MAP Payroll — *Good value!*
£49.00 • MAP Systems • 061-624 5662

PLUSES • MINUSES

- Can amend and re-run at any stage (even after printing payslips)
- Cash analysis is broken down into departments
- System prevents re-use or amendment of leavers
- Facility to hold up to 40 standard hourly and weekly wage rates
- ※ No SSP calculation facility (although there is provision to record amounts paid)
- ※ Programs necessitate a lot of disc swapping
- ※ Automatic amendment of tax code changes does not print a record of alterations made

Camsoft Payroll — *Simple and flexible*
£49.95 • Cambrian Software • 0766 831878

PLUSES • MINUSES

- Full payslip displayed on screen and any item can be amended immediately – when accepted the payslip is printed at once with an optional file copy
- Facility for freehand narrative on any payslip
- Uses M drive for programs to speed operation
- Built in on-screen help facility
- Search/sort routine for output to screen, printer or disc
- Uses alphanumeric employee codes
- ※ Screen menus a bit untidy and sometimes difficult to follow
- ※ No listing of cheques

Sagesoft Popular Payroll
£69.95 • Sagesoft • 091-284 7077

PLUSES • MINUSES

- Any or all employees payroll can be rerun at any stage up to final update
- Full pay history available for all employees and leavers
- Calculates average pay for holidays etc
- Very easy to install
- ※ Limited number of additions/deductions
- ※ Doesn't print a list of cheques
- ※ No analysis of additions/deductions

Compact Payroll
£99.95 • Compact Software ltd • 0306 887373

PLUSES • MINUSES

- Supplied with test data
- Facility to change employees tax codes following budget
- Can run payroll for several companies
- Program available for PC compatibles – data is transportable
- ※ Must be run from the master discs
- ※ Needs use of data input form and calculation of a check digit for each employee processed
- ※ Once payslips are printed nothing can be changed
- ※ Most expensive payroll program

Sandpiper Payroll
£79.95 • Sandpiper Software • 0978 355333

PLUSES • MINUSES

- Uses M drive to speed operation.
- Comprehensive SSP records.
- Cash analysis broken down into departments.
- Gives on screen review of payslips and allows amendments after payslips have been printed.
- ※ Can only process one department at a time.
- ※ Complicated installation and software protection procedures.
- ※ Slow cursor movement and bad positioning while entering
- ※ Documentation not very thorough.

UTILITIES

Mouse and Desktop — *Useful!*
£79.95 • AMS • 0925 413501

A whole new way of using your PCW – banish CP/M for ever. For your money you get a mouse and software which emulates the GEM Desktop environment found on PCs. All commands are given by pointing to icons on the screen, not typing at the keyboard. You also get calculator/calendar (etc) utilities thrown in.

PLUSES • MINUSES

- A genuinely useful desktop organiser, with well thought out utilities.
- Well presented and easy to use
- Makes CP/M commands easy
- The mouse can be used with a variety of other software
- ※ Takes up a lot of space in the M drive
- ※ Calculator and other utilities not available while running other programs
- ※ Can be irritating if you are proficient with CP/M

SuperType II — *Useful and fun!*
£24.95 • Digita International • 03954 5059

A program for users of LocoScript (1 or 2) and CP/M programs; which modifies the fonts (ie. the look of the characters) used by the PCW printer. SuperType has 4 'business' fonts and 4 'novelty' fonts, like Olde English. It works by directly altering the relevant files for LocoScript or CP/M, so you only need run it once – after that, the new chosen font is automatically available.

PLUSES • MINUSES

- Once installed, you can totally forget it's there
- Genuinely useful range of fonts available
- Works with LocoScript as well as CP/M
- All LocoScript's print size and style options still work with SuperType
- Doesn't take up any extra disc space
- ※ You can't mix different fonts in the same document

The Knife Plus — *Vital tool*
£19.95 • Hisoft • 0525 718181

An essential tool for retrieving data from corrupted discs. Knife Plus will copy all uncorrupted sectors on to a fresh disc which you can then patch up without risking the original.

PLUSES • MINUSES

- Copies *all* uncorrupted data from damaged disc
- If boot sector damaged, will copy good boot sector onto disc.
- ※ Requires some knowledge of basic disc structure
- ※ Manual not written for beginners

Money Manager Plus — *Best buy!*
£39.95 • Connect Systems Ltd • 01-743 9792

The souped-up version of the personal accounts package Money Manager which would serve a small business quite nicely. It acts as a daily diary, over 12 months, recording all incomings and outgoings between up to 9 accounts. Similar transactions can be grouped together, and simple reports can be printed. Money Manager also available for £24.95.

- Simple to use, requiring no accounts or computer knowledge
- Standing orders can be defined for each month
- Detailed and summary statements can be printed out
- VAT reports can be separated out
- Can present results as bar charts
- ※ No audit trail integrity
- ※ The statement format is not very flexible
- ※ Transfers between accounts are not cross-referenced

Point of Sale
£194.35 • Avon Computers • 0761 70543

For 8512s only. This program turns your PCW into a till-cum-stock controller – you enter each sale as it happens and at the end of the day your PCW gives you sales reports, stock details and suggested purchase orders.

PLUSES • MINUSES

- Good method of stock control for small businesses
- Ties up with many double entry accounts packages
- ※ No on screen prompts for accounts numbers
- ※ No out of stock warning during sales
- ※ Time taken to print out invoices could be inconvenient

Personal Tax Planner — *Money saver!*
£24.95 • Digita International • 03954 5059

Simple program which asks you all the questions relevant to your year's tax affairs, and prepares your tax return claim (or bill!). Useful to find out whether married couples would be better assessed separately or not, for example. Annual updates available.

PLUSES • MINUSES

- Simple to use
- Needs a minimum knowledge of the tax law
- Forces you to keep your tax details in one place
- ※ Limited application – you might only use the program once a year
- ※ Can't handle unusual cases
- ※ Program updates (for a new allowance level) cost £10

THE GOOD SOFTWARE FILE

UTILITIES • DESKTOP PUBLISHING

Signwriter
£49.95 • Wight Scientific • 01-858 2699

Prints out any string of text as a sign in a standard Roman font. Only limit on size of characters is the size of the paper and the quality is very good. Long messages can be printed lengthways on continuous paper. Extra fonts are available for £5.

PLUSES • MINUSES

- □ Good quality print – difficult to believe it's done on a dot matrix printer
- □ No limit on size of characters
- □ Text can be boxed and underlined
- ※ Signs take several minutes to print out
- ※ You have to pay for extra fonts

Tas-Sign
£29.95 • Tasman Software • 0525 718181

Takes time to print out but you can print signs of up to five lines of text up to seven inches high with up to 32 characters in each. Four fonts, eight hatching patterns, and you can print lengthways on continuous paper for long signs.

PLUSES • MINUSES

- □ Wide range of fonts and shadings
- □ Long signs will print out in 'landscape' (sideways) format
- ※ Long signs take time
- ※ Some symbols (yen signs etc) won't print out on PCW

Pertmaster
£69.00 • Abtex Software/NewStar • 0277 220573

Pertmaster is a project planning aid. You specify the events, sequencing and durations of the component tasks of a project, and Pertmaster will analyse the job by Critical Path Analysis. It can detect errors in the plan, produce reports and crude graphical summaries.

PLUSES • MINUSES

- □ PERT charts and Critical Path Analysis are established planning methods
- □ Up to 500 activities may be considered at once
- □ Plans can be altered to see "what if ..." results
- ※ The PCW isn't really powerful enough to do it justice; it certainly needs a PCW8512
- ※ Screen graphics are very weak; you can't get a graphical overview of the whole network
- ※ No simple default settings for a rough-and-ready plan

Write Hand Man
£29.95 • Hisoft • 0525 718181

This utility program sits in the background whatever you are doing – for example, if you are word processing, press the key and up pops a calculator, a notepad, or a diary. Designed to eliminate paper, but the more advanced functions (notepad) are so cumbersome they fail to be at all useful. Better to buy a £4.95 Casio calculator and a pencil & paper.

PLUSES • MINUSES

- □ Results from calculator can be 'pasted' directly into files
- □ You can re-define the PCW keys to produce strings
- ※ Manual is technical and incomprehensible
- ※ Notepad functions are slow and cumbersome to use
- ※ Takes up a lot of disc space and CP/M workspace
- ※ Costs much more than an HB pencil with notepad

Universal Self-Start
£19.95 • Cornix Software • 0462 682989

A utility program which helps you make up auto-booting discs from any program. This means having a single disc which can both start the PCW up and run your program. Bear in mind that you could do all this yourself for free if you can read the appropriate parts of the CP/M manual.

PLUSES • MINUSES

- □ Foolproof system of questions leads you on
- □ Wide range of options for printer setup, eg. different paper sizes.
- ※ Not comprehensive – doesn't PIP files across to the M drive, for instance
- ※ No help with setting up the keyboard
- ※ Program takes up 14k of the startup disc – you may need two discs anyway

BrainStorm
£49.95 • Caxton Software • 01-379 6502

An "ideas processor", BrainStorm is a computerised doodling pad. You can jot phrases down randomly, then organise them into a hierarchical plan, then expand each phrase into a finished idea, and finally print them out as a coherent document. If you find it easier to work at a keyboard than with a pencil and paper, this will really help you think.

PLUSES • MINUSES

- □ No limit to the number of sub-levels of plan you can have
- □ You can output the rough text, for a wordprocessor to polish
- □ Good documentation, and some neat ideas for applications
- □ Provides a unique service, which should be useful to you
- ※ Needs better graphics to let you browse the structure easily
- ※ Command keystrokes are unnatural, eg cursors don't work
- ※ As a word processor, it is very primitive

Astrocalc
£15.50 • Astrocalc • 0442 51809

A starter program for astrologers. More sophisticated programs to help the interpretation of the charts are also available.

PLUSES • MINUSES

- □ Takes the sweat out of creating natal charts
- □ Genuine astrological tool – not just a fake horoscope program
- ※ No graphical representation of the charts
- ※ Tutorial section rather pointless

Disc Mate
£24.99 • Siren Software • 061 848 9233

Disc Mate is a set of CP/M utility programs which bring complex disc recovery operations within the scope of CP/M novices. Facilities include recovering erased files and making files "read only" (i.e. unerasable).

PLUSES • MINUSES

- □ Simple on-screen instructions once you've got started
- □ Allows easy recovery of accidentally erased files
- □ "ZIPDISC" program speeds up disc access by 10 to 20%
- □ Friendly file copying program in case you find CP/M's PIP incomprehensible
- □ Can read both single and double density discs
- ※ The instruction sheet is very brief, so you'll need to understand CP/M basics

The Desktop Publisher *Great value!*
£29.95 • Database Software • 061-480 0171

A tremendous value for money package. Graphics and text boxes can be easily moved around and page layout is clear. You can edit text from within the program, using LocoScript-like commands to set bold and italics. Good range of fonts and graphics too – all at half the price of its rivals! Mouse optional for £50 more.

PLUSES • MINUSES

- □ Text editor allows you to edit articles to fit the space easily
- □ Boxes and general layout easy to manipulate
- □ Works with three mice, but fine with keyboard alone
- □ Half the price of other packages
- □ Good range of fonts and graphics, and you can design your own fonts using the font editor
- ※ Text boxes always expand if incoming text is too long – you can't fix their size beforehand
- ※ Headlines can look a bit jagged

Newsdesk International
£49.95 • The Electric Studio • 0462 675666

Versatile package with a very wide range of graphics facilities and high quality headline text. Page make-up is flexible, though the program can be a bit cumbersome and slow, especially in text handling. Includes all the facilites of Electric Studio's 'Art' graphics package.

PLUSES • MINUSES

- □ Good control over the elements on the page
- □ Powerful graphics facilities
- □ Good quality print in headlines and large fonts
- □ Can use font editor to create your own high quality fonts
- ※ Text handling slow and cumbersome
- ※ Not easy to undo mistakes
- ※ Menus can be confusing

Fleet Street Editor Plus
£69.95 • Mirrorsoft • 01-377 4645

A versatile and powerful package. You can create template-like 'page dummies' if your publication has several pages of the same format and handling of text, setting of margins and size of text boxes etc, is well controlled. Tends to stop working abruptly for no reason though and uses memory space extravagantly.

PLUSES • MINUSES

- □ Versatile integrated package
- □ Text handling sophisticated and controlled
- □ Can edit text from keyboard
- ※ Crashes occasionally
- ※ Odd use of memory in text editor

Fleet Street Font Editor
£19.95 • Mirrorsoft • 01-377 4645

An add-on to Fleet Street Editor plus. You can design your own fonts or symbols and there are five more fonts you can use in FSE+. There's also a selection of useful extra graphics.

PLUSES • MINUSES

- □ Designing your own fonts is fun and easy
- □ Extra graphics will be useful
- ※ You're paying twenty quid for something the other DTP programs have built-in for free
- ※ Maximum of five fonts in FSE mean when adding a new font to your FSE disc one of the others has to go
- ※ Not much for your money

DESKTOP PUBLISHING

Desktop publishing – or DTP – packages enable you to produce your own newsletters using your PCW. They come with a variety of fonts of a range of sizes for headlines and body text and a selection of 'clip art' graphics you can include in your creations (pictures of various objects and fancy heading boxes such as 'For Sale' or 'Stop Press').

You read in your articles prepared by a word processor into text boxes. If you can't edit the text from within the program, you have to go back to your word processor to fine-tune the article to fit – this is very tedious. Then you put your graphics in graphics boxes, make up your headlines, and then lay out your publication on the PCW by juggling the position of your boxes on each page. Finally you can get a copy of each page on your printer (though not if it's a daisywheel, of course, as on the 9512) and photocopy the results.

Your graphics can be taken either from the package itself or from TV or real life via a video digitiser.

The end results won't be of sufficient quality to compete with the professionals, but for club and company newsletters, leaflets, posters and small-scale publications, DTP packages could be invaluable.

NEXT MONTH

The guide continues with DATABASES, COMMUNICATIONS, EDUCATIONAL PACKAGES and PROGRAMMING. After that it's SPREADSHEETS, GRAPHICS and GAMES and the month after *that* it's back to this month's categories.

Our intention is to keep publishing the three parts of the guide in rotation, updating it each month to include all new products. If you would like to see other sections of the guide, back issues of 8000 Plus are available from our Somerton address at £1.75 each.

Meanwhile, if you are aware of any significant errors or omissions in the File as published, please let us know. We want to maintain it as THE authoritative guide to PCW software.

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DTP & GRAPHICS	
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Newsdesk International	37.75
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DR Draw	35.95
Dr Graph	35.95
Elec Studio Light Pen	62.95
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DATABASES	
Masterfile 8000	37.45
Cambase	36.95
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Tas-spell 8000	12.75
Tasprint 8000	13.45
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CORNIX	
Simple Accounts	27.95
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Product costing	39.95
QUEST BUSINESS CONTROL	
Int A/Cs Sales/Invoicing/Stock	79.95
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Word Link – for Wordstar users invoice spooler – 75 line inv. Stock sort – arranges records.	
Above three at (each)	29.95
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GOT CAUGHT RECENTLY? THEN GET–	
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Dragonfly Designs

present

Software designed for use with Electric Studio's graphics packs.

COMPLEMENT. As previously advertised, this is a disc of Fonts and Borders for use with both the updated 'ART' package and 'NEWSDESK INTERNATIONAL'. There are three Art Deco, two Art Nouveau and three other fonts on the disc, as well as three Texture Fonts (large fill patterns) and a "baker's dozen" of Borders, kits of snip-art that assemble into professional quality surrounds for your text. This advert was produced using only the material on the disc.

BORDERED. Designed for use ONLY with 'NEWSDESK INTERNATIONAL', this new disc contains .PGE files that are laid out with pre-set Borders for almost immediate use. All that the user has to do is split the various border sizes (A4, A5, and A6 on the same page) into separate files. Approximately half of the disc uses material from 'COMPLEMENT', with the remainder as new material for experienced users to save in a similar manner as the kits on 'COMPLEMENT'. Special items on the disc include 'frames' for your artwork and a correctly positioned A6 card/notelet template with more frames.

OUTLINE. Also for use ONLY by 'NEWSDESK INTERNATIONAL' owners, this is a disc of carefully prepared Templates designed to speed up the layout time involved in page set-up. Full instruction is given on each template for you to either print out or erase each time you use them. Pages supported include A4-2 and 3 column, A5 (horizontal + vertical), instruction for back to back registration and special pages including Personal Organiser and Notelet. A Master Grid is included for your own use in page layout.

All at £12.50 per Disc (including Recorded Delivery in the U.K.) Illuminated Fonts and more are in preparation.

58, The Shrublands, Horsford, Norwich, Norfolk. NR10 3EL.

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£34.95 *inc. P&P*

SWALLOWSOFT PUBLICATIONS (Ref. B)
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Am-Stax

– THE ULTIMATE SPACE SAVER

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The new Am-Stax 8 Series is a unique stand that will stack your PCW 8256 or 8512 plus keyboard and printer in under a quarter of a square metre of floor space. Its reclining monitor position and angled keyboard make the PCW even more user friendly. The Am-Stax is 98 cm high, 41 cm wide and 52 cm deep with keyboard at 73 cm height. Constructed from rigid MDF board and beautifully finished in durable red, white or black lacquer, the unit comes to you as a flat pack kit which is easily assembled in minutes with the allen key provided.

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■ Be warned. The program, backed up by a huge built-in dictionary, plays a very mean game. It knows all the rules and will use every trick in the book to build up mind-boggling scores.
■ The full Scrabble board is displayed on the screen with all the squares in their usual places. More than one player can take on the computer simultaneously, and you can set the program's level from super-fast to super-smart. There are other options, including the facility to see the computer trying out various words.
■ The program also checks your words against its dictionary and will query any it doesn't recognise – but yes, you can overrule it. Much friendlier than a human opponent in that regard.
■ It's just as well, because you'll need all the help you can get if you're to beat the machine.
■ A fantastic program at an amazing bargain price

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We have limited quantities of the back issues listed below. The prices include a nominal 25p postage. All issues contain excellent TipOff sections and a selection of BASIC listings, plus the other regulars. Don't miss the chance to expand your collection.

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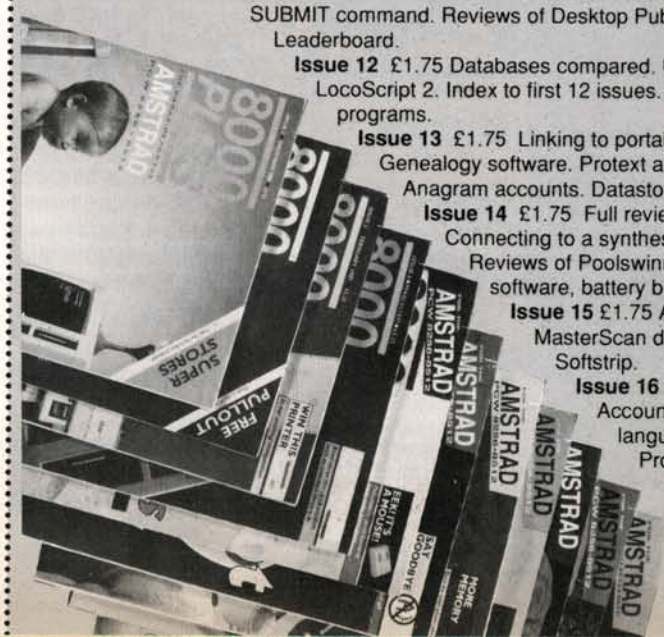

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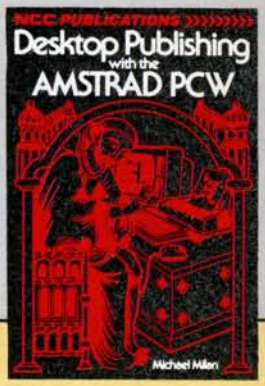

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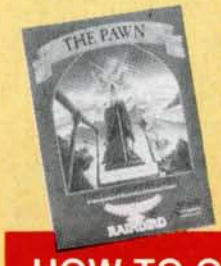

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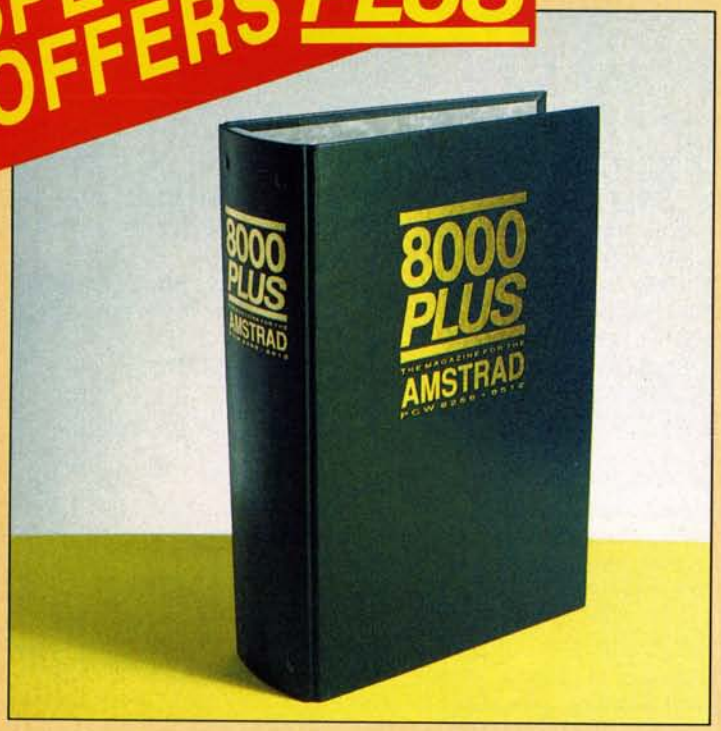

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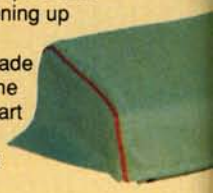

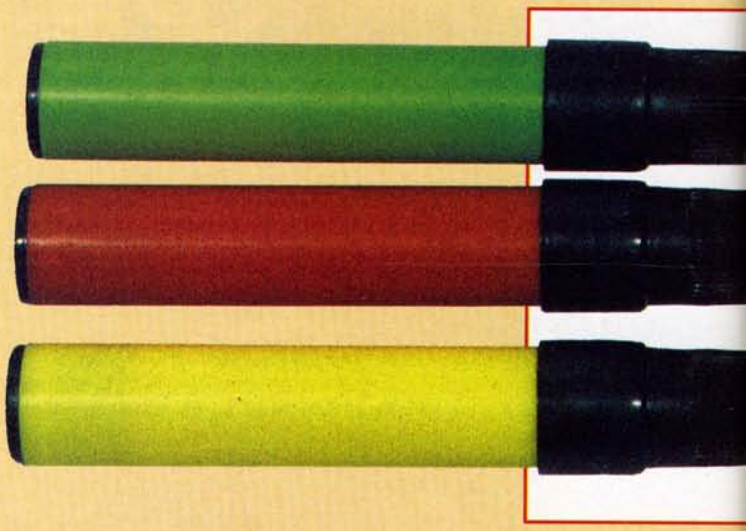

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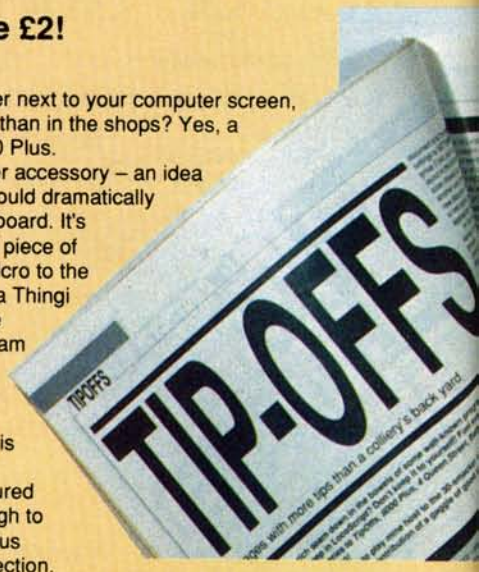
What's white, dangles paper next to your computer screen, and costs two pounds less than in the shops? Yes, a Thingi bought through 8000 Plus.

This remarkable computer accessory – an idea so simple it's ingenious – could dramatically ease your hours at the keyboard. It's basically a cleverly-shaped piece of plastic that attaches via Velcro to the top of your micro. But with a Thingi on your PCW you can have documents, letters or program listings clipped right next to the screen in perfect reading position.Any task involving copying off paper is thereby made much easier and faster. In fact, the coloured clip supplied is sturdy enough to support an issue of 8000 Plus open, say, at the Listings section.



The Thingi comes in two versions one for positioning to the left of the screen, the other to the right – the Velcro attachment allows easy readjustment or temporary removal.

A sensible, cost-effective add-on for your PCW.

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INTERESTING FACT. 8000 Plus has one of the highest percentages of postal subscribers of any magazine in the UK. Most PCW users would appear to be incredibly enthusiastic about their machines and rely on the magazine for a regular source of tips, reviews and general advice. It's the only way of keeping properly in touch with the bubbling, constantly-changing PCW scene.

Paying £17.95 for a year's subscription won't save you much on newsstand prices. But it does mean you'll get a copy every month delivered hot off the press direct to your door. No more frustrating searches through newsagents who've already sold out.

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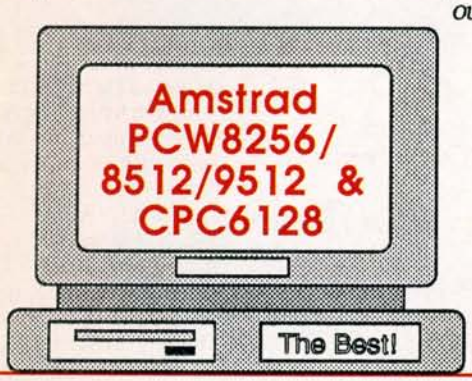
HiSoft has been producing languages and utilities for the popular home computers for the last 8 years and we have a very wide experience in this area. Here is our collection of development tools on a selection of Amstrads; please feel free to ring our friendly sales staff if you want any more information or advice on which language to use. We don't just sell programs, we use them ourselves every day.



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We have been beavering away over the 'summer' months carefully crafting lots of new software products. The results are two new programs for the PCWs (**Knife Plus** and **HiSoft Lisp**) and another two programs (**Projector** and **Creator**) for the PCs. Here are some details:

Knife Plus is the *ultimate* disc recovery system for your PCW computers. How many times have you lost files or complete discs when using Locoscript or CP/M? Or accidentally erased programs? Now there is hope with Knife Plus. Definitely a cut above the rest, Knife Plus includes a full sector editor, sector copier, build-file option, many utilitities and an informative manual. A snip!

HiSoft Lisp is a powerful Lisp interpreter with over 300 functions. Based on Common Lisp with libraries for MacLisp & InterLisp, HiSoft Lisp comes with a fully interactive editor, CP/M file handling, m/c code interface, ring-bound manual and is packaged with an excellent tutorial book by Tony Hasemere with many example programs on disc. HiSoft Lisp is ideal for beginner and expert alike.

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POSTSCRIPT

A plethora of pithy post perused and presented by a pensive Ed.

Welcome to PostScript – the pages where you can pass comment, sound off, ask for help or challenge our opinions. This month's batch of letters roams far and wide over all topics from the laws of supply and demand in New Zealand to colouring doughnut shaped planets. Read on and widen your education.

We'd like to hear from all of you – send your two pen'orth in to *PostScript, 8000 Plus, 4 Queen Street, Bath BA1 1EJ.* We can't undertake to give personal replies, we're too busy writing the next issue! Long letters may be edited.

Help a cleric

I am a clergyman who is hoping soon to lay my hands on a PCW for use in my parish work. I wonder if I could use your PostScript columns to ask other clergy who already have the machines in what capacity they find them useful, what software it would be worth getting hold of etc?

Also I would imagine that under the Data Protection Act if I were to use the PCW to keep records of parishioners on disc I would need to register. Could you let me know how I might go about this, and what fees might be involved?

Revd M Komor
50 Allen St, Mountain Ash, Mid Glam. CF45 4BB

● *You will have to register under the Data Protection Act. The address to write to for a form and information pack is The Data Protection Registrar, Springfield House, Water Lane, Wilmslow SK9 5AX. Registration typically costs around £40.*

Protext on the 9512

I have some problems concerning 8/9512 PCWs on which I would appreciate some help. I use an 8512 at work and am considering replacing my Amstrad CPC6128 with a PCW9512 for home use. Naturally, I want to create material on one to use on the other.

1. Is Protext, version 2.07, totally compatible with the 9512? If so, how does it instruct the 9512 printer as the only daisywheel program it has is that for the Juki 6100? My local retailer says that he has been told that it is only partially compatible and that the dictionary, among other things, won't work on the 9512. If it isn't compatible, when do Arnor propose to issue a 9512 version and will that be suitable for the 8512 as well?

2. My 6128 can write to a Protext DFORMD 8512 created disc and this can then be read by the 8512, Drive B. Can the 8512 read Protext files that were written on a disc using the 9512 and vice-versa, thus allowing creation of a file on one machine but printing on the other?

3. Will a 9512 be able to load and run Cardbox Plus, which at present runs on the 8512? My 6128 flatly refuses to do so or even to acknowledge that the program exists on the disc. Also, will it run an 8512 version of First Calc?

Some help on these problems, through the pages of 8000 Plus, would be appreciated.

G Guilbert
Guernsey, Channel Islands

● *Protext will run on the 9512, with a couple of snags (although Arnor say a 9512 version should be out by the time you read this – check up on 0733 239011). You can spell check a file but you can't store changes to the dictionary (because the 9512 cannot write to single density discs, which the dictionary disc is). There is no problem printing – the Juki driver is suitable, and anyway the 9512 printer can emulate the 8000 printer if it needs to.*

As to questions 2 and 3, 'yes' and 'yes', 'yes'.

Hopeful castaway

Let me be the first to claim a refund of my sub for pointing out your deliberate mistake in Desert Island Tipoff no 7 (December issue). At the end of the first para [+]UL [-]LP should surely be [-]U[-]LP. Just think, if you don't publish this, that poor fellow on the desert island will be condemned to underlining that goes on for ever and ever...

Christopher McCready
Oxford

8000 Plugs

I was amazed at the resemblance between Alec Rae and the picture that we used on our VIDI video digitiser's British Microcomputing special award press release [Keywords, issue 15].

Perhaps we had overestimated VIDI's true to life frame grabbing ability? Perhaps Alec Rae has a double? I determined to find out so as to prove that we were right and you were wrong.

I asked the person responsible for compiling the photo who exactly he had videoed for the picture in question. Back came the reply – "Oh, that one... I found it on a disc

Interfering thoughts

I use the 9512 on premises with a landlord whom I would like to keep on good terms with. However, he has been complaining loudly that ever since I have had this machine (having previously used an 8256) he is getting very upsetting noises from his intercom whenever the machine is heavily in use. Having got no help at all from Wildings, where the machine was purchased, a friendly technician at Amstrad suggested that surrounding the side and rear of the machine with chicken wire and/or tin foil might help.

Having traipsed around the west end of London trying to find some chicken wire, I now have the machine covered in this, as well as tin foil for good measure. It works. It does however, look awful and whilst it may be quite fetching and seasonal dressed up with cotton wool and a red scarf during Christmas, I still have not given up hope that there may be a more aesthetic solution to this problem for the rest of the year.

Ingrid Hankins
London W12

● *There are two kinds of interference that electrical equipment can cause – radio frequency emissions and mains spikes. Since you say that surrounding your PCW in tin foil cures it, you must be suffering from the first kind. Either complain to your dealer and try a different 9512, or use your PCW in the garden shed (the effect diminishes with distance), or do as you have with metal screening to construct a 'Faraday Cage' to shield the PCW.*

Another kind of interference is mains spikes (fridges cause a lot of this when their pumps switch on and off). You can buy filters and smoothing units which protect your computer from the mains and vice versa.

we got back from 8000 Plus!".

So, problem solved. You are absolutely right. Although no one would have known if VIDI had not been such a real-to-life digitiser. (Absolutely stunning piece of kit for only £99.95 inclusive!)

Marcus Sharp
Rombo Productions

● *If you think we're going to print this letter, thus giving you even more outrageous free publicity for your products, you're quite wrong.*

CP/M's group theory

Can you clarify a point arising from your CP/M article 'Group Behaviour' in issue 15?

The first illustration after using the command `SHOW [USERS]` lists the files in each of the four user groups on the disc (numbers 0-3) as 10,6,4 and 13 respectively, giving a total of 33 files. It also gives the number of free directory entries as 28. The caption claims that groups 0-3 contain a total of 28 files. This no doubt is an error resulting from mistaking the 28 free entries for files used. The real point however, is this; the 33 used plus 28 free gives a total of 61. Some of my own discs show various combinations of used and free files, all totalling 61. How does this square with the total of 64 files allowed according to manuals?

J Coleman
Penkridge, Staffs

● *The example screen shot that we used inadvertently showed a special case which wasn't covered in the article. The full story is this: a disc can contain 64 (for single density) or 256 (for double density) 'directory entries'. Files actually use one directory entry per 16k, so for example the J14CPM3.EMS file at 40k needs 3 directory entries on the disc. So if you have long files on the disc, the number of directory entries used will be more than the number of files on the disc. Using `SHOW [USERS]` on a blank disc will reveal 64 free directory entries as you expect.*

A hash of it

I have encountered problems in trying to implement the "SORTERS" program listed in the September issue.

Firstly, when the program is entered correctly on screen, ie. with the relevant "#" marks, listing the program on the printer produces "£" instead of "#" and when attempting to run the program in BASIC the message "File type error in 50" appears. I cannot find an alternative way of including the "#". The manual indicates the English keyboard variant for "#" to be [ALT]+3, but whilst this produces "£" on screen a print-out shows neither a character nor space for one!

E A Henderson
Southport

● *Forget the printed output, if the # character is shown on screen as you expect then the listing is OK. For obscure reasons the # sign always prints out as £ on the printer. If you really want to print out true #s you'll need to set the printer to the 'American' character set, which you can do from BASIC with the command `LPRINT CHR$(27)+"R"+CHR$(0)`.*

This won't affect the program's running though. It sounds as if your problem (File type error) is you've made a mistake with the `OPEN "I",1,name$` in line 40 – you may be to be trying to input things from a file declared as an output file.

Last word on Logo

It's a little galling, after months of learning to use Dr Logo by trial and error, to see 8000 Plus giving away most of the answers to all and sundry, but congratulations and thanks to you and to John Connell for the Dr Logo chart in the centre pages of your December issue. As far as I can tell, the only items not included are the useful but tricky `fill`, the mysterious `setpen` and esoteric `REDEFP`, `.DEF`, `.PRM`, `.APV` and `.FMT`! However, a few improvements or corrections are possible, I believe, as follows:

`po` can be used to print out the definition of a procedure as well as the value of a variable

`noformat` removes formatting from any defined procedures in the workspace. Dr. Logo allows long lines in procedures to be divided into indented shorter lines for clarity, and comments (like BASIC `REM` statements) to be included. For example, a procedure can be written as:

```
to square
;procedure to draw square
repeat 4
  [
  fd 100 ;100 steps forward
  rt 90  ;turn right 90 degs
  ]
end
```

When the procedure is run Logo treats the indented lines as part of the preceding line, and ignores the text following each semicolon. It's interesting to type the Logo command `gprop "square".FMT` to see how Logo stores the format. However, type `noformat` and the format is forgotten: the indented lines run together and the ';' comments are deleted from the memory. Fairly pointless, though it saves space!

`se` & `list`: The chart does not make the distinction clear; try comparing the results of typing `pr (list [This is] "a [short list])` and `pr (se [This is] "a [short sentence])`; the first retains the square brackets and, according to the command `count`, contains only three items, not five words as in the second case.

`word` The correct format is `(word "a "n "d)` not `word ("a "n "d)`.

`dotc` outputs 1 or 0 not TRUE/FALSE

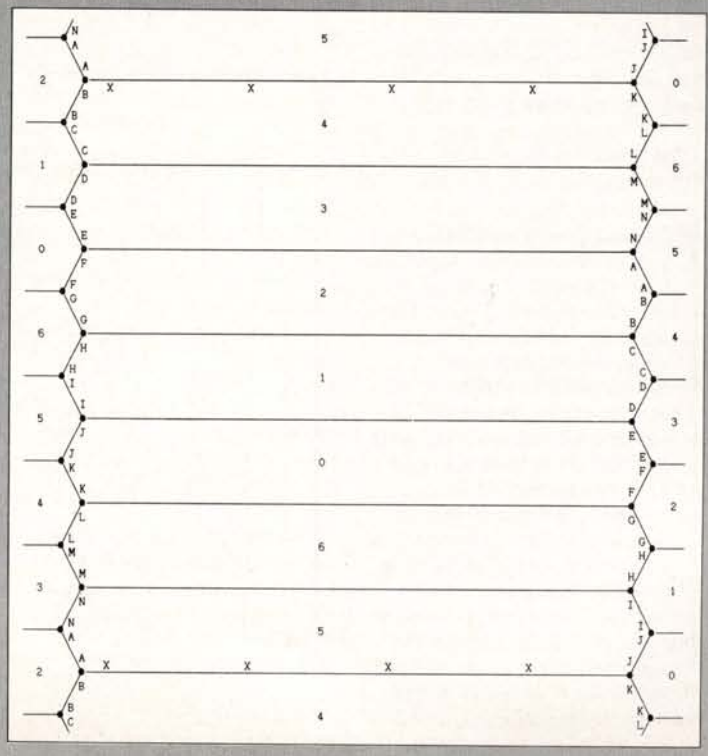
`ed` can be used to edit variables as well as procedures

`ern` erases variables not procedures

Doughnut adjust your set

I do not think the 'Topology note' [about colouring a map without any two adjacent countries having the same colour] on page 37 of the December issue says what you intended it to say! The smallest number of colours needed to colour any map on a doughnut-shaped planet was determined last century as you said, but the number is seven and not four as implied in the note.

That some maps do require seven is easily proved by drawing a suitable arrangement of countries on a doughnut. First draw a honeycomb of hexagons, as in the diagram, and then cut out the strip of seven complete hexagons. Ideally the diagram should be printed on a thin sheet of rubber, but it might be difficult to get that through a PCW printer! Now cut out the strip of seven main hexagons and glue the edge marked XXXX to the other edge marked XXXX.



At this point you have a tube with serrated ends. Bending it round and joining the ends will give a doughnut-shaped surface, but before joining give the tube a twist in order that the two edges marked AA can be glued together. All other pairs of edges BB, CC, etc, will also match up and can also be glued (in theory at least). The result is a doughnut-shaped planet with seven hexagonal countries, each of which has a frontier in common with the other six. Thus to ensure that adjacent countries are coloured differently, each country must be a different colour from the others.

Many mathematicians do now believe that four colours suffice for maps drawn on spherical planets, but since the proof involved several hundred hours of computing time on a very powerful machine, it is virtually impossible for the average mathematician in the street to check it – even if she/he owns a PCW!

For the early history of map colouring may I suggest you consult the book *Graph Theory 1736-1936* by NL Biggs, EK Lloyd and RJ Wilson? Better still buy a copy – with two co-authors I only get one-third of the royalties.

Incidentally, the diagram was

changef doesn't seem to work, at least in the version of Logo I have.

A final minor complaint: please don't define Logo commands like .in and .out by reference to obscure BASIC commands; that's rather like translating 'plume de ma tante' into Chinese, when all we want is the English!

John Clark
London SE1

● *Thank very much for your useful comments. Another little erratum we've spotted is in the* and *and* or *conditional tests: the correct way to test is* (and (:x=50) (:y=50)) *not* ((:x=50) and (:y=50)) *as the chart said. Similarly for* or.

School of thought

As a teacher I have been very impressed by the 8256/8512 and the ease with which the pupils at school mastered LocoScript. I therefore decided that the 9512 would be the ideal machine for my wife's home based Typing Service (now renamed Typing and Word Processing Services!).

A visit to the Amstrad G-MEX Exhibition seemed to bear this out and a 9512 was purchased from Nabitchi at the amazing price of £499 inc VAT. This was eventually (!) delivered and it really is a superb machine.

However, I have one little problem – I wanted to prepare material at home and then print it out on the dot-matrix at school to save on wear and tear on printer and ribbon (and noise!) In reply to Chris Kaley last month you said to simply pop the disc into the B drive of the 8512 .

I tried this, and after a few moments discovered that I could no longer make use of the mail-merge. Is there a *very simple* way round this problem?

SN Garril
Blackpool

● *There is a very simple way, but unfortunately it does involve parting with money. LocoScript on the 9512 comes complete with the spell checker and mail merger, but on the 8000 series machines you have to buy them extra. You'll need to send off to Locomotive (see one of their adverts) for 'LocoMail for LocoScript 2'. It costs £29.95. After this, your mailmerging will work.*

"HEY MISTER-THIS ONE'S ONLY GOT SIX COLOURS ON IT"

drawn using LocoScript 2 version 2.12 – the design-your-own characters version.

Dr. EK Lloyd
Southampton University

● *Our mathematician in residence claims that he always knew you need seven colours for doughnut planets, and the apparent mistake in the 'Topology note' you refer to was caused by an editing error. If you think this sounds like bluster, you won't be surprised to learn that Rob Ainsley is the author of "The Bluffer's Guide to Mathematics" to be published in February. Well, if you can*

Ageist challenge

Glancing idly through the correspondence columns of another magazine I noted one letter was from a 15-year old and another from a gentleman who proudly informed the readership that he was over 60. I wonder how your readership compares and who are the youngest and oldest practitioners of this black art. Let me put in my own bid with 67¾ years.

J Coleman
Penkridge, Staffs

Autobooting BASIC

The 'Bank statement' program on p63 of the December issue was exactly what I (World's no. 1 Computer Thicko) had been trying to generate for myself with conspicuous lack of success. It is now up and running at home, but to encourage herself (wife of W's no. 1 CT) to make use of it I would appreciate your help with the following:-

1. How do I put the whole thing – CP/M, BASIC and the bank program on to one autostart disc so that the 8256 can be switched on, the disc inserted, and the first touch of the keyboard be to answer the question 'ACCOUNT NUMBER?'

2. (Only needs to be answered if the first requirement is not possible) As it is working for me at the moment, the top of the screen fills with the CP/M and BASIC data, with the cursor below. If you then type in 'RUN ACCOUNT' the information starts from the top, superimposed on what is already there. The only way I have found so far to get a clear screen for the statement is to keep punching [RETURN] until all the text has moved up and away. No doubt there is a more sanitary way of doing this but it still seems an unnecessary chore.

3. A third – unrelated – query. You have probably realised that this letter is being typed using a 'SuperType' font. I am very pleased with it, but it most definitely requires proportional spacing. I have lost count of the number of times I have set the printer going, only to notice about half-way through that I was in the default condition, pitch 12. Is it possible to make the default PS?

DB Minterne
Dorchester, Dorset

● *To make an autostart disc you will need to take a fresh formatted disc and copy on to it the files J14CPM3.EMS, BASIC.COM, SUBMIT.COM and your bank account program. If you don't know how to use PIP.COM just copy the files using LocoScript. Let's say you call it the accounts program ACCOUNTS.BAS. Then create an ASCII file called PROFILE.SUB on that disc containing just the line* BASIC ACCOUNTS *(use the PCW's RPED editor or LocoScript and its 'Make ASCII file' option). The disc will now autostart.*

Point 2: you must have mistyped line 10 of the program since it should clear the screen automatically.

Point 3: if you edit your TEMPLATE.STD file to make Pitch PS its standard then that will always carry through to any other files created in the same group.

Continuous printing

I use Supercalc 2 to calculate and print out 60 piece-work wage sheets.

PROFILE.SUB PIPs everything on to M to increase the speed of the Execute file which automatically loads and prints each successive sheet.

However, as only two variables are entered most of the time is spent watching the printer whilst waiting for the next sheet to be loaded.

Is it possible to store all the completed worksheets and then print them continuously without returning to the keyboard?

A Yaffy
Glasgow

● *It isn't possible in SuperCalc as it stands, but there are programs called 'spoolers' which will do this kind of thing. Essentially they reserve a portion of the M drive as a large print buffer. There are public domain spooler programs which are obtainable from the various PD software agencies listed on our Public Domain page. Alternatively, MML Systems (01-247 0691) sell a commercial one.*

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Shop locally

We here in NZ look forward to 8000 Plus's arrival in the bookshops every month. Unfortunately, it takes many months to arrive – August's issue arrived last week.

Now for the crunch! How about putting a part in the rear pages that contains all the addresses of those whom you mention as giving certain services, but give only the telephone number in the main body of your mag. Of course we could ring them up, but it costs a mint! Our mail takes about a week to reach the UK and generally we can get the goods or reply back within three weeks of sending from here. That's a better service than some of our locals. Your suppliers can be congratulated on their service. With a credit card, it's most helpful and there is no messing about with bank drafts etc. and all those extra costs. Thank you.

In your August issue, on page seven, there was a small article "Shaking the Family Tree" detailing that Kintech had made arrangements with the Mormon church to put their Personal Ancestral File, the CP/M version on to the PCW. The PAF is one of the leading Genealogical Database files, and I have a copy on 5¼" discs for the Kaypro, but have been unable to get anyone to install it on 3" discs for me. Besides, it's in CP/M 2.2. That poses another question. Is there any program that allows or can convert CP/M 2.2 to

run on the PCW's CP/M Plus (CP/M 3)?
J V Macfarlane
Wanganui, New Zealand

● *You can usually find out the address of any company mentioned in the magazine by looking at the advertisements – the advertiser index is on the last page each month. We'd rather spend the space printing more reviews and articles!*

Copying 5¼" discs to 3" discs is not always cheap. In England, Grey Matter (4 Prigg Meadow, Ashburton, Devon TQ13 7DF) will do it at about £10 a disc, but then you've got to trust your discs to the transglobal post services,

As for running old software (like some PD software) written for CP/M 2.2, Advantage sell a disc called "Compleat Utilities" which among other things claims to allow CP/M 2.2 program to run under CP/M 3 (the version bundled with the PCW). We haven't tested it, but it's cheap and worth a look.

Communications problems

I have recently purchased a *Psion Organiser* which claims that it can be connected to a computer, and that cross-communication is possible. I am sure that this is the case since there is a fifty-nine quid thingy which is available.

Would you mind telling me if it is possible to connect the Psion (lovely name for mispronunciation by the way) to my PCW8256, and if so how, and at what cost. Would you couch your advice at Inexpert Level 1 please (eg. "there is a hole with prongs at the back... etc." Just what is an RS232 Port and have I got one – should I lay it down, or drink it now?)

Secondly, do I really have to pay £225 for a Sage communications outfit before I can write directly to my mate in Boston – surely there is a cheaper way? Other machines including other Amstrads seem to be able to do it for much less.
A.H. Piercy
Ramsgate

● *Well, there is a hole with prongs at the back of the PCW. This is the 'expansion slot' and is where you plug extra hardware into the PCW. One such piece of hardware is a box called an 'RS232' Serial/Parallel Interface (the obscure name is the result of some international standards committee's deliberations). This box costs about £60 for a PCW.*

Once you have got this box on your PCW you can transfer text files to and from your Psion, as long as your Psion has an RS232 interface and the correct lead (I presume this is what the fifty-nine quid buys you). The exact way you do this depends on your Psion, but you may find our article in issue 13 helpful, where we covered transferring files from a Cambridge Computer Z88 portable to a PCW, using an RS232 serial link.

To talk to your friend in Boston, you will need two more things: most importantly a 'modem', which is a device that converts the signals which come out of the RS232 interface into a form suitable for sending down telephone lines. Modems start at around £100. You will also need some software to run on the PCW to control your modem – the best value at the moment is Mini Office Professional (£29.95 from Database Software) which has a good communications section.

All told, this lot sets you back getting on for £200, so you can save a little on your £225 by shopping around. Some computers do have built-in modems, but then that's why the basic PCW is hundreds of pounds cheaper.

More print wheels

I am the proud, if somewhat computer illiterate, owner of a new Amstrad PCW 9512. I have, however, managed to muddle through the manual and it is now capable of doing everything that I wish it to. (Except cook the dinner!)

I am, however, a bit unsure as to how I go about obtaining print wheels in French and Cyrillic for the standard PCW9512 Printer. I also need to know if I would need any other software to make them work. The other question is, once I have got hold of the appopriate print wheels is it possible to obtain something to put over the keyboard to indicate which keys to use for the relevant characters?
Margaret Hutber
London W12

● *Printing in French is easy, you have to order a 'Swiss French' print wheel from any Amstrad dealer. LocoScript 2 as shipped on the PCW is set up to expect this wheel as an option, so it'll work well with the software. I don't know of any Cyrillic print wheels for the 9512, so you're a bit stuck there. Anyway, you'd need a pretty big daisywheel to cope with all the different characters.*

Mother of invention

To my discredit I am neither a teetotaller nor much of a Christian, but I find that I agree with everything said by the Rev. RW Clements. I also find that your comment after his letter typical of your attitude and does you no credit. I am writing about you people, and in accordance with the idea of choosing file titles that hint at the nature of the subject I have called this one SMARTASS.BOR.

Having suffered the puerile style of many articles from your editorial staff, I received a mental image of you gathering in one of those mean places to which British pubs have degenerated, listening to mindless music and drinking the gnat piss sold there. When the first badly-written article on Protext appeared you confirmed my suspicions with your fatuous suggestion that a can of lager is required.

You could find a reference to canned lager in the publications of the Campaign For Real Ale. It is the example of what is the very worst. I have there read the view that such a beverage is for maiden aunts, retired colonels and other weaklings.

There is a well-known Freudian explanation of your bombast. People unsure of themselves often claim qualities they lack. You like to print remarks from readers praising you. I expect you write a few of them yourself. Many will be genuine but they will come from come from people who think that canned lager is good to drink or that Thatcher cares for the British people.

I bought a piece of hardware with software because you had recommended it highly. I received no help from the manufacturers when I told them that the manual was incomprehensible to the point of rendering the thing useless. You did not accept responsibility for your recommendation as you ignored my letter asking for advice. You did not even publish any of it with your usual glib and unhelpful note.

The thing that prompted me to write was your irresponsible idiotic comment on the Rev Clements's letter which was well-meaning and, as an admonition, fair. I know that you will not be in any way influenced: I doubt you take any real notice of the replies to your recent questionnaire which was likely to have been just window dressing.
SH Scott, Ph.D.
Watford

● *Well, how many people think we made this letter up?*

We try to angle the content and style of the magazine at as wide a range of people as possible, and I'm sorry it hasn't pleased you. You may be interested to know that we've only ever invented one letter in the PostScript pages, and that was a complaint!

We can't be expected to help every single reader personally with difficulties in products they have bought from somebody else. We could start a technical help service, but it would be a full-time job for somebody and we'd have to charge something like £10 an hour for it.

The last word

I know you said that correspondence on Digital Research's CBASIC compiler was closed, but perhaps you will permit me to make a comment on Nicholas Graham's letter in the January issue. His problem is probably due to the fact that he is using floating point instead of integer variables in his program. The speed difference is quite amazing. I copied your test program from page 44 of the same issue and compiled it using DR CBASIC and then edited it to remove the % signs which define the variables to be integers.

The first program, using integer arithmetic, ran in less than 12 seconds. The second took over 15 minutes (I can't give an exact time as I wandered off to do something else after about 15 minutes and came back to find it had finished).

The moral is, as Mr. Hall of Locomotive Software said in the December issue, use defined integers wherever possible. I have used CBASIC to compile several old games programs. After solving the minor translation problems I now get an instant response in, for example, Othello, instead of practising my thumb-twiddling.
Digby L. James
Mitcham, Surrey.

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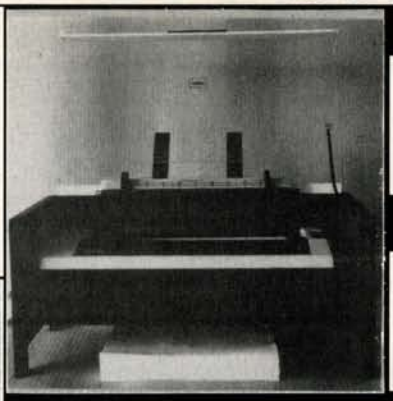

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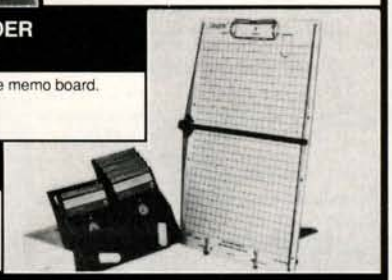

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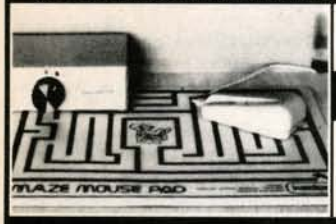

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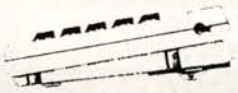

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